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PODSPEAKERS LANDED



6 NEMS



ON THE COVER



p60 Lappy of the gods

p70

Top of the

bots.

Pad of the future



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0715











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TOP 10 OF EVERYTHING

Looking to buy something but need a bit of advice? Turn to our Stuff Top Tens: our expert listings of all gadgetry, from p119







...to a watershed moment in technology. This isn't just about the 'smarthome', the 'internet of sofas', or whatever you want to call it. There is a change happening, and it is fundamental: since the first primate picked up a sharp

twig and used it to remove a delicious beetle-larva from a rotting log (don't knock it 'til you've tried it), technology has been something we've used. But now, gadgets are using themselves.

I first noticed this earlier this year, when I started using a smart thermostat. After the initial phase of mucking about with it every time I got home. I've left it to its own devices (if you'll pardon the pun), and somehow I've had a nice warm flat and used a lot less energy. Like everything from our ancestor's grub-twig to your new superphone (see p70 to find out which one you should buy, by the way), it's just a tool; but unlike the other tools, it works on its own. Increasingly, every tool you use will be more like that: more self-using, more independent. Perhaps more alive.

Eventually, of course, this will lead to a world that's run by maniac robots who hunt us for fun, but until then, put your feet up - robot vacuum coming through - have your coffee machine make you a mechaccino, and let's see what your robo-home can do. 0

Will Dunn, Editor / willd@stuff.tv / @willydunn



THIS MONTH IN STUFF'S **DIGITAL EDITION**

- Animated, interactive pages, videos and more hi-res pictures
- 360-degree photography of the Microsoft Surface 3

Android fan? Stuff is also available on Google Play, Zinio, Exact Editions and Samsung's Papergarden.

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Teddington Studios, Broom Rd, Teddington, Middx TW119BE, UK

Peter Brown

Editorial Assistant

Max Langridge

Editor Will Dunn **Deputy Editor** Tom Wiggins **Production Editor Richard Purvis Consulting Editor** Fraser Macdonald Features Editor Mark Wilson **Reviews Editor** Tom Parsons Sub-Editor Emily May Brand Art Editor Chee-Chiu Lee Deputy Art Editor Ross Presly Senior Designer Will Clarke Editor, Stuff.tv Marc McLaren Staff Writer Esat Dedezade Apprentice Web Producer Kvle Pittman Apprentice Designer Natalia Sliwinsk Senior Video Editor

Fditor-in-Chief Will Findlater International Director Alastair Lewis Publishing Manager Ollie Stretton Marketing Executive Office Manager Sarah Weetch

Contributors

Andrew Williams, Jools Whitehorn, Justin Mahboubian Jones, Jon Urry, Philip Ryan, Lindsey Baker Thanks to

Matt Beedle, Alex Fanning, RGB Digital, Bratislav Milenkovic Cover illustration

Cover photography Matt Beedle

Jing Zhang

Advertising 020 8267 5190 Advertising Director Sales Manager Liz Reid Display Sales Executives Matthew Larkin, Luke Ricketts

Classified Sales Executive Joshua McGonigle

International Business Dev Manager Amardeep Mangat Head of Creative Solutions Chris Bullen

Creative Solutions **Project Managers**

Liam Maguire, Hannah Pettifor Creative Solutions Editor International Advertising Director

Business Development Director Mike Walsh

Production

020 8267 5414 Production Manager Anthony Davis Senior Production Controller Newstrade Marketing Manager Nick Lyon Syndication Enquiries

Isla Friend 020 8267 5058

Subscriptions Hotline

0844 848 8806 World: +44 (0)1795 592 987 Email stuff@servicehelpline.co.uk Web www.themagazineshop.com

Editorial Director Mark Payton Creative Director Paul Harpin Strategy and Planning Director

Managing Director David Prasher Chief Executive Kevin Costello

- Volume 19 issue 7
- ISSN: 1364-963 On sale 3 June 2015
- Audit Bureau of Circulations: 77,340 (Jan-Dec 2013)







S

TRAILBLAZING ON A SONY AFTERNOON

Water lot easier

A day-in-the-life montage of an Xperia user will see them breezily taking their waterproof phone into situations we'dbe wary of. Cut to bedtime, though, and it's an unhappy face as they prise the cover off the USB port. No more! The Z3+'s USB socket is fully waterproof, but needs no cover.

2 LDAC's the way I like it

The Z3+ gets Sony's LDAC technology for better streaming of high-res audio (if you have LDAC-equipped Sony speakers) over Bluetooth. Sony says LDAC offers three times the wireless bandwidth of standard Bluetooth, and allows the Z3+ to stream to up to ten speakers at once.











FUN BEGINS AT FORTY

Volkswagen Golf GTE Sport

With next year marking the Golf GTI's 40th anniversary, VW's designers have been given carte blanche. And look what they've come up with! The plug-in hybrid GTE Sport combines the 1.6-litre turbo engine from its championship-winning Polo World Rally car with two electric motors. The result is roughly 400bhp, driven through all four wheels via a DSG gearbox, until you hit 62mph after just 4.3 seconds. And if that sentence wasn't muti-layered enough for you, wait until you see the interior of the GTE Sport – an event that's going to have to wait until you've played with the gull-wing doors for at least ten minutes.

As hot as... its claimed 141mpg efficiency £tba (concept) / volkswagen.co.uk



HOT FOUR



SO GOOD, THEY NEARLY BANDIT

TomTom Bandit

About a year ago, GoPro told us they were working on some way of minimising the editing process that takes so much of the fun out of action cameras. Tom Tom may have beaten them to it. The Bandit automatically tags your video based on input from its various sensors: GPS, accelerometer, barometer and even an external heart-rate monitor, if you're strapped up. You can tag bits too, using a button; and once you're down, or up, or at least stopped, a simple shake of your smartphone tells it to create a lightning edit using those tag-points as references. It's like having your own personal video editor, except you don't have to pay them or feed them. Also, the battery/SD card section detaches from the camera's body to reveal a USB socket, so you can plug it straight into a laptop or power source. It'll shoot 4K, but only at 15 frames per second, which isn't ideal for fast action, while it spins up to a much smoother 60fps for a 1080p picture.

Ashotas... bandits at six o'clock from £300 / tomtom.com







PUT YOUR MONEY WHERE YOUR TASTE IS

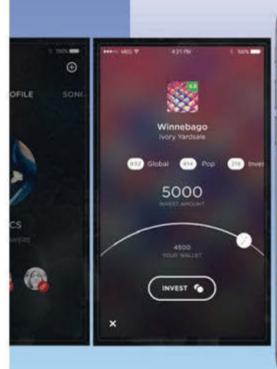
It's not easy being a musical genius. No matter how naturally gifted you are or how brilliant your logo is, you might never be 'discovered'. A life of pub backroom busking awaits. Tradiio (pronounced 'trade-e-o') wants to help fix that. As is becoming a tradition for web startups, rather than relying on The Man to tell us what's hip, it lets the crowd decide.

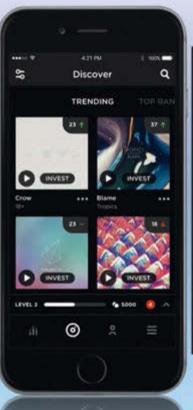
This iOS, Apple Watch, Android and web app has a transactional model that functions like a stock market. When you join, it greets you with

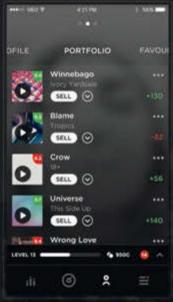
a gift of 4050 'coins' that you can invest in any of the artists in its roster. Listen to bands who have uploaded streams of their music for free, and if you like, give them some digi-cash.

If you're an early investor, the value of your investment grows with the profile of the artist. While you can't swap your virtual gains for real cash, you can use them on exclusive artist gigs and festival tickets.

Ashot as... a fresh bag of Hot Chips Android, iOS, web / tradiio.com









Worth a punt while it's free

WILL FINDLATER

awillfindlater



Tradiio intends to move to a crowdfunding model, where your virtual coins become real, but this will be far from

simple. For now the best reason to try Tradiio is to browse through the app's smartly arranged New and Trending sections (it's all free to access) and make a punt here and there.

There's no guarantee that you'll be first to unearth an exciting new artist – 30,000 other users are already jockeying to do the same thing – but there's still plenty of

opportunity to get in early and make a little pseudo-dosh.

For anyone who considers him or herself a bit of a muso, this could become addictive — and that suggests Tradiio might be onto something.

T7 Bluetooth Speaker with Micro Matrix™ Or in layman's terms, it sounds great.

It has taken Bowers & Wilkins 50 years of acoustic knowhow to make the T7. And thanks to high-resolution streaming via Bluetooth aptX® and an incredible 18 hours battery life, you're guaranteed best-in-class performance wherever you are.



£299.99

from authorised retailers

Buy direct from bowers-wilkins.co.uk/T7 Two-year warranty Free delivery

Bowers & Wilkins

VITALSTATS

THROW YOUR DRONE IN THE AIR, USE WITH CARE



Don't have your own camera-drone pilot? We do, and Lily is making him nervous

She's not the first.

The first follow-me drone we saw, called AirDog, was successfully Kickstarted last year and lots of excited crowdfunders are perched on their doorsteps, awaiting delivery this autumn. But now a new auto-follow drone called Lily has arrived on the scene, promising more functionality, better looks and a lower price if you'll wait just a bit longer. Some of those perched pre-orderers are looking a little antsy.

She's a looker.

Lily is distinctly more of a finished product that the GoPro-carrying AirDog. Eye-like lights display her status, and the camera is held in what looks disconcertingly like amouth. Instead of the moretraditional mechanical gimbal that drones like the DJI Inspire series use to steady their cameras, Lily has digital stabilisation: basically a big sensor that she crops into intelligently, taking 1080p video from the stable centre of the frame. There's 120fps shooting for you slow-mo fans, and at the push of a button on the remote she'll take a 12MP still. All is saved to the included microSD card.

You can run but you can't hide.

Well, you can. Just go inside. But generally speaking, Lily will do her level best to keep you in the frame. Following app-inputted orders to keep you in front, to the side, or to loop around you, Lily will stray no further than 15m above or 30m away from you. She can fly at up to 25mph, ideally in light winds, and she can do that for 20 minutes. Which, frankly, is more than enough future video-editing work for one day, but two hours of charging will see you good to go again if you fluffed the run. The wrist remote has a microphone that will catch the expletives if and when you mess it up.

THE WRIST
REMOTE HAS
A MICROPHONE
TO CATCH THE
EXPLETIVES
WHEN YOU
MESS UP









THE UPS AND DOWNS

Launch Lily

So long as the blue eyes are lit, lob her into the air and she'll quickly gain a stable hover and wait for you to do something interesting. The body is waterproof and floaty, so you can launch from the water.

Launch yourself

Via the iOS or Android app you can preset which flying pattern you want Lily to follow. She'll avoid getting closer to you than 1.75m, because that's a nice distance for spinning blades to be kept at.

Land Lily

Presuming neither you nor your remote documentarian have come a cropper during your run, and there's some of the 20min battery life left, Lily should land demurely on your hand.



Ministry of the interior MINISTRY OF SOUND AUDIO M PLUS

All your boys are in 'da club'. All the 'laydeez' are also in 'da club', apparently. Where are you? You're at home in 'da onesie'. But you're not missing out, because your MoS wireless speaker has a button to livestream the tasty beats from Friday and Saturday night at the famous London venue. If you have several of these new speakers — there's an 'L' size as well as this 'M' — then you can arrange them into an app—controlled multiroom system that rivals any club you care to put the non—word 'da' in front of . Maybe change out the onesie before any laydeez arrive.

£200 / ministryofsound.com



Gardener's questing time EGO+ POWER MOWER

We're about halfway through the year — how's that lawnmowing going? Cursing the staccato running of your petrol hog? Bemoaning the cable–tangle of your electric? You need an electric cordless grass–muncher. Not a new concept, as any idle trawl through the Argos catalogue will tell you. But this one is powerful: 56V of daisydestroying, blade–blasting Sunday afternoon horror show. And yet, so quiet. So dignified. The price includes a 4Ah battery, good for about 45 minutes — which is about as much mulching as any man can bear. Especially when one of Ego's other products is waiting in the shed: a 56V cordless chainsaw...

£500 / egopowerplus.com

STARTMENU

The latest startups, crowdfunded projects and plain crazy ideas



One thing to control them all **NUIMO**

Nuimo is capable of controlling over 30 things around your home – everything from smarthome devices like a Nest thermostat and Hue smart bulbs to apps such as Spotify and Netflix. Why? Because the Internet of Things has too many Things in it. How? Via four input methods: clicking, turning, touch-swipe and air-swipe. The central button is clickable and has an LED display; the outer circle can be turned. It's not as much of a configuration nightmare as it sounds, because the Bluetooth Nuimo is actually just talking to the app on your phone or PC that controls the device. Neat.







BACK IT

Murray squawker PULSE PLAY

This digital scorekeeper aims to banish over-the-net barneys — never more prevalent than in these Wimbledon times. The Pulse Play also works for table tennis, squash and badminton: it shouts out the score, syncs your game stats to its app and then ranks them online for your opponents to titter at.

US\$75 / pulse-play.com



A cure for dropsy **SMARTCHUTES**

The skies are getting crowded. Commercial, government and private drones battle for airspace. Crashes are inevitable. A bolt-on parachute seems like a low-tech solution: it bolts to the side of your drone, with its own battery and sensors to detect a spill and fire a 36in parachute that'll bring your beloved safely back to Earth.

US\$140 / smartchutes.com



No-phone smarthome

Smarthome systems are a tough sell at the moment. Oomi's USP is having its own touchscreen remote where you can physically tap on new sensors to add them to the system — the company reckons smartphone apps are too confusing. The campaign has utterly smashed its goal, so perhaps consumers agree.

US\$300 / oomihome.com



Chips before Pi

The C.H.I.P. is an open-source computer board that can be yours for the small price of US\$9 (just under £6). And it sounds solidly capable, offering a 1GHz processor, 512MB RAM and 4GB of storage. It connects over Wi-Fi 802.11b/g/n and Bluetooth 4.0. You can also get it with a portable battery for \$19 (about £12).

US\$9 / nextthing.co

See the Great, Feel the Great

LGC4



See the Great Feel the Great

The Visibly Smart LG G4

LG G4, Stuff.tv, May 2015

Combining style with substance, the hotly anticipated LG G4 delivers a truly breathtaking visual experience. Featuring a pro-quality 16MP camera with an F1.8 aperture lens and 8MP front-facing camera for 'super selfies', you'll be able to capture professional-looking pictures that 'pop' with detail and clarity. Combine this with the stunning IPS Quantum Quad HD Display, and the G4 will be your perfect smartphone companion to capture and enjoy the moments that matter to you.

In-stores and online from the end of May 2015

www.lg.com/uk/G4



















NEWS FEED



THE NETWORK THAT DOESN'T CHARGE

US network FreedomPop is to launch its free phone service in the UK. So long as you have a phone to use, a FreedomPop SIM will give you 200 minutes, 200 texts and 200MB for free, with the company profiting from your inevitable desire for add-on data bundles.



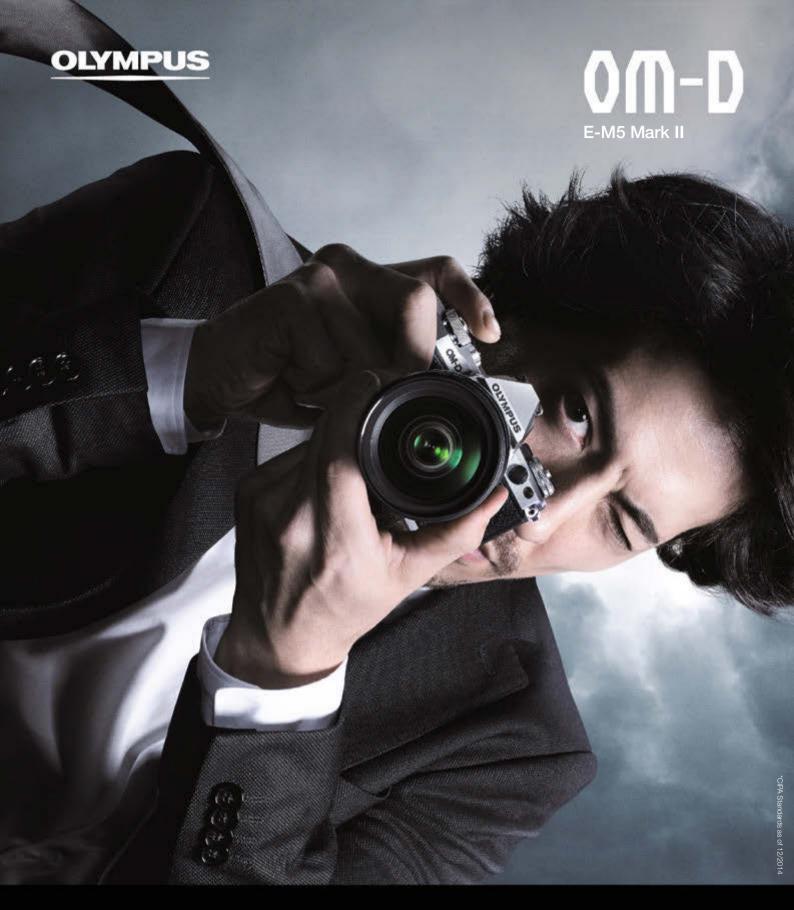
PAYETH NO MORE

Summer metal-fest Download is to go entirely cash-free this year, making it the first of the UK's big outdoor shindigs to do so. Progressive rockers will upload funds to the Dog Tags website and pay for food, drink and illadvised Slipknot T-shirts with an RFID wristband.



EYE PHONE

Oh, your iPhone scans your thumb, does it? Big whoop: Fujitsu's new Arrows NX F-04G (snappy name, guys) has a built-iniris reader, like the biometric eye scanners at airports. So now the only way a criminal could access your data would be if... oof. Actually, maybe we'll stick with passwords.



YOU ARE FREE

Follow your creative visions with the new OM-D E-M5 Mark II. Capture spur-of-the-moment photos and movies in breathtakingly clear quality thanks to the world's most powerful 5-axis image stabilisation*. This OM-D is also ready to go wherever you go, in any situation. The compact build won't weigh you down, while the robust construction is set for taking on the elements: dust, splashes and freezing temperatures. Freedom has never felt so free – with the OLYMPUS OM-D.



Brighter than the sun? EXPOSURE LINK

Summer has thrown off her Uggs and started her long, delirious dance. Cyclists face many decisions at this time of year, not least among which is whether losing all the skin off your toes is a high enough price to prevent the joy of riding in flip-flops. But a more crucial choice: do you leave the lights at home? Exposure, which is a lights company, says no. It says that bright sun and drowsy drivers demand, if anything, better and brighter lights than winter. Like this Link, which clamps into the top of your bike helmet and provides almost 360° of red and white light. Run-time from the titchy 39g beacon ranges from 1.5hrs (both lights, full on) to over 24 hours with just one LED flashing, and it charges via microUSB.





Radio waves PURE POP BY MINI MODERNS

There's a panic room at the Stuff office. Well, it's more of a panic sideboard. On it is kept a varying supply of biscuits, sweets and elixirs of dubious origin, and its purpose is to provide a refuge for when we receive an alarming press release. Something such as "Motor manufacturer designs perfect bicycle." Alarm! Or: "Electronics manufacturer announces new designer collaboration." Panic! In this case, however, suitably emboldened by Bourbon (biscuit), and at the outer range of a wireless mouse, we opened said email to see this Pure collab with British design house Mini Moderns. Whether in the smaller Midi size (£90) or the larger Maxi (£110), it's a really rather tasteful designer DAB. "I'd have that," said one slightly choctoxicated Stuffer.

from £90 / pure.com



FUTURE STUFF E-DIESEL

Fraser Macdonald fills up on Audi's clean, green fuel

Developed by Audi, e-diesel is a synthetic liquid fuel that doesn't require any standard mineral oil – its main components being carbon dioxide, water and air.

The latter two are in plentiful supply, while the CO_2 is mainly extracted from biogas (the by-product of decomposing organic matter, which we imagine smells really bad but is nevertheless technically 'clean') using power derived from renewable sources.

Production of e-diesel isn't merely a matter of mixing all the above together,

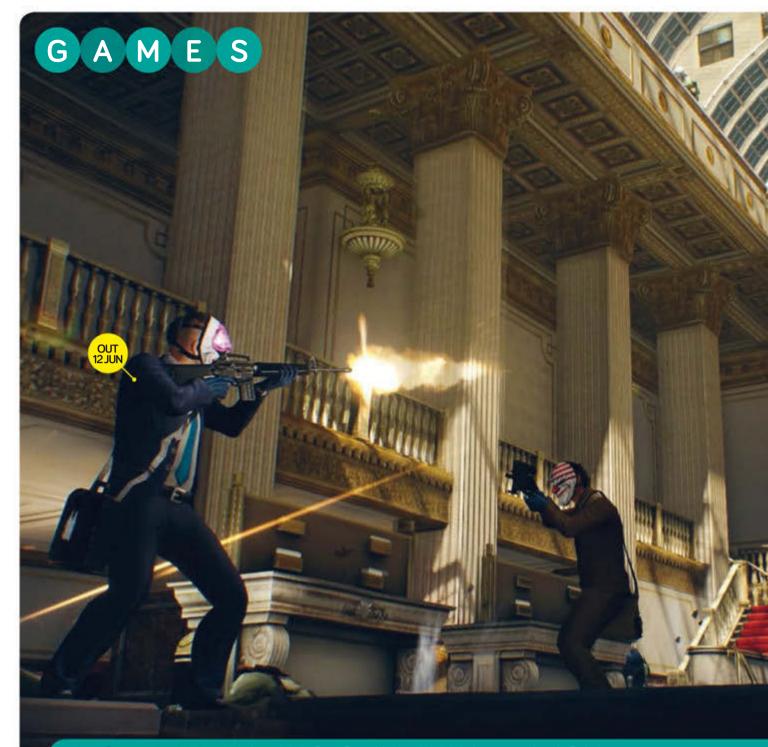
of course. Steam is broken down into hydrogen and oxygen by means of electrolysis at a temperature of over 800° C. The hydrogen then reacts with the biogas–derived CO_2 to form a liquid Audi calls 'blue crude'. This can then be refined to make ignitable e–diesel. It's totally clean, the only use of fossil fuels being in its production.

Audi has only recently started producing it, but plans to produce over 3000 litres (not a vast amount, but we are talking about a



whole new type of fuel here) in the coming months — and it claims synthetic petrol, or 'e-gasoline', isn't too far off.

The only question, therefore, is whether this is too little, too late, as purely electric cars become more capable, more easily rechargeable and — crucially — more desirable to drivers.



FIRST PLAY PAYDAY 2: CRIMEWAVE EDITION PS4,Xbox One

Robbing a bank, like attempting a loop-the-loop around the Golden Gate Bridge in a jumbo jet, is one of those things best done in a virtual world.

So if GTA V's online heists have given you a taste for co-op criminality, Payday 2's next-gen debut, the Crimewave Edition, is for you. It has more than 20 DLC packs plus slightly spruced-up graphics. You won't stop to look at the scenery, but that's for the best as you'll often have entire strike teams on your tail.

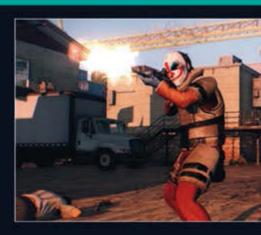
strike teams on your tail.
As part of a four-person team
you take on robberies that vary

in complexity and difficulty, from the relatively simple task of knocking off a security van in an upmarket town square, to liberating a crashed money train of its stash by burning a hole through the carriage and pumping the safe full of water in order to pop it open.

Completing a job is unlikely to ever be a case of simply walking in, pocketing the cash and waltzing out to a waiting getaway vehicle. More complicated jobs require proper teamwork in order to keep the cops at bay and control any

hostages while you get to the loot. And all that's rarely straightforward: Payday 2 has more drills than an overly conscientious fire warden at B&Q, and the damned things keep jamming.

Fortunately, your standard copper is lacking a little in the smarts department... but the more serious things get, the tougher and cleverer the boys in blue become, until you're up against SWAT teams with smoke grenades and heavily armoured one-man armies.





TONY HAWK'S PRO SKATER 5

For gamers of a certain vintage, the Tony Hawk games marked a golden age of console gaming, when multiplayer mode meant meeting up with real humans and passing the pad over a packet of Doritos and some foreign lager.

So after months of Tony Hawk teasing it from behind his Twitter account, THPS is back – and the man himself promises a return to the classic OTT gameplay that made the series such a hit, albeit with an online twist.

Players will be able to drop in and out of online skateparks to compete against skaters from around the world, linking together a preposterous number of tricks in some locations that look more than a little familiar. This being a *Tony Hawk* game you'll be able to take control of the Hawkmeister himself, or pick from a range of 'boarders who we're sure are a very big deal to some people, including Nyjah Huston, Aaron 'Jaws' Homoki, Lizzie Armanto and Tony's son Riley Hawk.

Curiously, the first set of screenshots suggest they've kept the graphics oldskool too, but we'll reserve judgement until we see it in action, probably at E3 later this month.



STUFF PICKS APPLE WATCH GAMES





SPY_WATCH £1.49

If wearing a smart watch doesn't already make you feel like 007, Spy_Watch should. You're the M of your own agency and a colleague will periodically contact you from the field for instructions, successful missions being rewarded with upgrades to your spy's skills. Just make sure you don't get mixed up with your normal texts and end up telling Mum to assassinate Dad.



RUNEBLADE £free

Runeblade boils down the battles of a full-on RPG to a few simple taps on the face of your Watch. With each monster you manage to slay you'll get some gold dubloons which can be spent on spells and used to boost your stats. It's no Skyrim, but you'll soon find yourself clocking on to defeat an accursed stoorworm or hexed wolf while you wait for the bus.





LIFELINE £2.29

Lifeline puts you in contact with a stranded spaceman. It all happens in real time, so you can play it as you go about your day. Sometimes he'll just need words of support, other times you'll need to Google something for him (3G is pretty weak in outer space), but if you don't find yourself genuinely caring about his fate, you're colder than the dark side of the moon.





INCOMING

THE FLAME IN THE FLOOD

MADDEN NFL 16

SEPTEMBER

METAL GEAR SOLID 5: THE PHANTOM PAIN

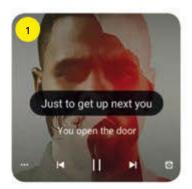
LEGO DIMENSIONS

OCTOBER

HALO 5: GUARDIANS

NEVERMIND

This month's mobile must-downloads











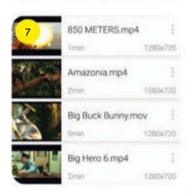




start his senior career?









A trolleyload of Twitter tweakery

has trundled into Android town. The

new Highlights feature pokes you

twice a day to show you smashing

Androiders have stopped shouting.

things. iOS users will get it once



3 Does Not Commute

Efree / iOS, Android

Your task here is to drive vehicles across a top-down cityscape. But each journey you complete repeats while you're driving the next, so that soon you're having to avoid your own self-made gridlock.

1Musixmatch

Efree / iOS, Android

A significant UI overhaul for the lyrics-serving music app: the Floating Lyrics feature is more powerful, popping up in Spotify or your lock screen, and there's an Apple Watch extension too.

5 Ryan North's To Be Or Not To Be

£4.49 / iOS, Android

2 Twitter

Efree / Android

A choose-your-own romp in and around the Hamlet narrative. North is the writer behind the Dinosaur Comics and Adventure Time comic books, so it fairly barrels along.

6 Sky Sports Soccer Quiz

Efree / iOS, Android

Score by answering questions correctly, which veer from stupidly easy to weirdly obscure, but headto-heads provide some diverting post-match entertainment.

4 Google Calendar

"Be together," said Google. "Not the same." And now we can be together in that iOS users can use Google's delicious calendar app. But we are the same, because we're all using the same app.

7 VLC for Android

Efree / Android

VLC, a video player brand striving to turn its desktop fans into app users, knows you use your eyes and ears separately, so it lets you bring other apps to the foreground and still hear the audio.

8 Grim Fandango Remastered

from £7.87 / iOS, Android

It's a lot of money for a mobile game, but this port of the recently released desktop remaster is a whole lot of noirish point-and-click for your money.

9 Spacecom £2.29/iOS

You don't belong here. You should be up there, flitting between planets. Trading, warmongering, succeeding. But here you are, having to make do with this slick, involving space sim.



CLEAR £3.99

This simplest of simple apps fills a crucial gap in the Watch's repertoire: to-do lists. Set them on your phone, tap the tasks on your Watch as they're completed.

RULES! £2.29

Developers who found their mojo creating simple concept games should be in their element with the Watch. This mini-game is just complex enough, we reckon.

STRAVA from Efree

Nike+ and Strava are the apps we get the most feedback about. What an athletic lot you must be. Nike+ looks great on the small screen, but Strava gets the nod for reliability









All budding athletes can use a great training partner



With Cortana and Office on the Lumia 640, you can become as fit as you're training to be. Cortana learns and remembers your preferences, and provides reminders based on your location and contacts. And with Office and Skype included, you can talk to your friends and track your progress so you'll always hit your targets.

Now includes one year of Office 365 Personal for your PC & tablet.

Microsoft Lumia 640

Together with



I C O N

MIITO

from US\$90 / miito.de

Inat Kitchen Followe

Is over-engineered.

It would be if it were. But what if it were actually something else, and what if, compared to the product it was aiming to replace, it was actually dramatically under-designed? A revolution in domestic minimalism? What if it was, in fact, the best kettle since sliced bread?

Exactly! That is exactly the reaction that the Miito designers wanted to provoke. But that's not the end of it. There's an inherent function to this form that makes conventional hot drink preparation seem hopelessly archaic. What's the point of us buying hybrid electric cars if we're just going to heat water in Product A when we fully intend to drink it out of Product B? How can we possibly walk in 40% recycled shoes when milk pans can be bought prescription–free, over the counter?

Wrong. This is the end of the kettle. Kettlegeddon! This is the device that draws out the flaws of the kettle like some long-endured embarrassing tapeworm and waggles them in front of society. Put your mug of water, or your cup o' soup, or your bowl of milk on the platform. Insert the metal-ended wand splodger thing and, by the magic of induction heating, you have the exact amount of hot for your pot. No excess water heated, no hob left tutting and cooling as polar bears look on disapprovingly through your kitchen window. Begone, foul kettle!



Beginning to feel like a fifth wheel OUADRO 4

'Many x small = awesome' is today's engineering doctrine. So a small petrol engine combined with a small electric motor makes a better car, lots of small solar panels are better than one big wind turbine, and so on. But one feels that there ought to be rule-proving exceptions, and this four -wheeled scooter seems like a contender. We've seen city bikes with two wheels at the front and that's eminently sensible, introducing dependable grip and steering on Britain's rough roads. But the Quadro 4 also sends its 300cc engine's 30bhp to twin driven rear wheels. Can four little wheels really be better than two or three medium ones? Time to test the theory.

£tba/quadrovehicles.com



Where the Tidal bears have their picnic ASTELL & KERN AK JR

If you go down to The Woods today, you'll be sure of a big surprise. But only if 'The Woods' is the name of your local hi-fi specialist and the kind of surprises you like are learning that there still isn't a huge market for high-resolution audio portables. Sony does a couple, while Astell & Kern make those really expensive... hang on a minute, £400! Surely this marks the turning point for high-res audio fans: a world where they can rock a 24-bit/192kHz-playing, DSD-loving chunk of Wolfson DAC-packing aluminium and call themselves music

fans. Where they can revel in the secondary ability of the AK Jr to be a USB DAC for their PC or Mac. Oh, do go down to The Woods today! £400 / astellnkern.com

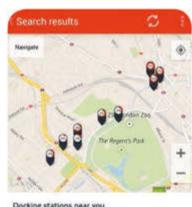


☑DROP EVERYTHING & DOWNLOAD

Santander Cycle Hire

Efree / iOS, Android

London's cycle hire scheme should have been the urban dream, for locals and visitors alike. But alas, fate and bureaucracy conspired to kill the system's spontaneity with an inscrutable totem of power at each docking station. Behind a queue of students – each clutching a ratty €10 note as they faced an uncooperative touchscreen and a ketchup-smeared payment machine - who wouldn't give up and walk? Or get an Uber? Well sing hosanna, for the switch in sponsorship from Barclays to Santander has given us a new cycle hire app – and the ability to pay online and get an on-screen unlock code for a bike. At last!







ELECTRIC ROAD TRIP

Can you drive 1000 miles without a drop of petrol? Will Dunn investigates just how far you can get in a Tesla Model S

Because it's not easy to drive for 1000 straight miles in the UK without plunging into the sea at some point, our electroquest aimed for Milan, via the Eurotunnel (also electric), a few mountainous wiggles and five Tesla Superchargers.

The Calais Supercharger's a pretty bleak spot, but the others we visited were generally nice places to stop for lunch: one in Champagne is next to a shop that sells locally foraged truffles, while another in Switzerland overlooks a glassily clear, fish-filled lake with a sublime view of the Alps. Plan your charges to coincide with meals, and it doesn't feel like waiting around at all

Superchargers are still few and far between compared to petrol stations, and at the moment a Supercharger-only trip will involve some extra miles, but the Model S does all the range-worrying for you. On our first stretch, a fast 200-mile motorway run, it warned

me to dial back my speed by 10km/h to save energy, and as I did, the car readjusted how many miles we'd have in the battery when we arrived at the next charger.

The Model S is a stunning car for a road trip: American-sized and comfortable inside, it has smart, speed-adjusting cruise control that makes long-distance motorway stretches easy and relaxing. But it was when we started to climb from France to Switzerland, and then towards the high mountain pass into Italy, that the Model S really began to have fun; the sporty frame and the formidable torque from the motors made every sinuous bend a joy to whoosh through.

It was also in the hills that we put the battery to its most stringent test. Not only were we driving inefficiently, we were also pushing a weight up a mountain, and the car's range estimates plummeted. But while the ascent took its toll on the battery, the long, steep

descent on the other side did the opposite: from the 2000m-high Simplon Pass down into Piedmont the car used its regenerative brakes to charge itself, and by the time we reached our first stretch of autopistait had added 30km of range, using only the magic of gravity and dynamos.

The only truly worrying point in the entire 1000-mile journey

came right at the end, when we had to ease the 2m-wide Tesla down into a garage in Milan that was clearly designed for a Fiat 500, but even then the car's centimetre-accurate parking assistance made it relatively simple. The Supercharger network hasn't made it much further south than Milan yet, but there's always Scandinavia...

CAR PETROL COST





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CREATES
PERFECT COLOUR

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Masterfully engineered with a discreet style and sound designed by Harman / Kardon™, the LG OLED TV is the World's most advanced TV. Ever.

lg.com/uk/discoveroled







BESTOF



I like to ride my bicycle, I like to ride my biiiike... But I'm happiest when it pedals itself

Verdant servant

You can charge the Footloose IM's battery from the mains, but pedalling adds more volts to the pot the green way



SETTING US AQIVR



JIVR

Zany-looking electric bikes are one thing. If they can fold, then that's another thing. And if they also have a clever mechanical linkage hidden in their frame that means you can still pedal home, then that's another, very clever thing. The JIVR is all these things, and it's also compatible with the yet-to-flourish-but-potentially-interesting iBeacon tech. The specs may be normal – 20 miles of 15mph – but the JIVR is interesting indeed.

£1500 / jivrbike.com

SPINNING CLASS



Mando Footloose IM

Ah, it seems like just yesterday we were giddy about the first Footloose. What, 2012, you say? Where does it go, eh? This is the nonfolding Footloose IM. Announcedlast year, it is freshly arrived on our (online) high streets. The rigid design means it's lighter and cheaper, and it gets a removable battery. It has a claimed range of up to 37 miles, depending on whether you're willing to assist with those electricity-generating pedals. from £1500 / mandofootloose.com

ASSAULT ON BATTERY



Karmic Koben

In a few years we may well wind up perched atop a huge pile of dead, rotting electric bikes and Toyota Priuses. We'll ruminate on how it might have been better to put more thought into battery design. That's the ethos of Karmic's bike: while most of its competitors are designed so that you have to replace the whole battery pack, the Koben's battery has individual cells that can be replaced. Food (possibly tofu) for thought.

US\$1900 (approx) / karmicbikes.com



A cacophony of a conundrum DENON D-M40

For over a decade, Denon's D-M series has been the go-to mini hi-fi for those with an educated ear. This latest version handles lossless FLAC, WAV and AAC files via the front USB, and keeps the digital iDevice connectivity. There are now two optical digital inputs, improved CD transport and an uprated headphone amp. The speakers are better too, and DAB radio is included. But here's the tricky bit. Smaller wireless speakers, such as Denon's own HEOS 5, cost the same and will scale into a multi-room system. So you've got to really want the D-M40's old-school hi-fi construction, the CD player, the connectivity. Do you?





USEIT WITH... Lomo LC-A Minitar-1

If the analogue-centric
Lomo were to create
an add-on lens for a
digital camera, Leica
seems like a good fit.
Well they have, and the
28 mm M-mount lens
will add arty vignetting
to black-and-white
Monochrom pics.
£250 / shop.
lomography.com



Red, green, blue, be off with you! Leica M Monochrom

Having filed Leica's original as—expensive—as—a—car Monochrom under 'Those Lovable Nutters', we were surprised to hear that the iconic camerafacturer has launched a new version of its black—and—white beauty. Leica has upped the pixel count of the full—frame sensor to 24 megapixels and the ISO rating to 25,000. There's a bigger, better rear screen, all the better to enjoy the new Live View mode and 1080 p monochromatic video recording, and a crispier Maestro processor and 2GB buffer keep all this running smoothly—including continuous shooting at 3fps—leaving you free to consider the full impact of your stark imagery.

£5750 (body only) / leica-camera.com

DECIPHER ALLOW ME TO EXPLAIN...



#3 HDR TV

Sam Kieldsen



Barely has 4K hit the living rooms of Britain, and already there's a new technology to consider. As keen photographers

will know, HDR is short for High Dynamic Range. Essentially, it refers to an image with a greater brightness and luminosity range than 'normal' pictures — so dark areas will look darker while bright areas will look brighter, and the whole picture takes on more detail.

Unlike 4K, you don't need a huge screen to appreciate HDR. It's about making pixels work harder, rather than just adding more of them, but there's no reason why 4K and HDR can't team up for stunning all-round image quality.

Unless, of course, it's overcooked, which is why we'll need to keep the Michael Bays and Zack Snyders of this world under some kind of HDR control order. This won't be a problem for a while, though — HDR-compatible AV products are sparse, with only Sony

THIS IS ABOUT MAKING PIXELS WORK HARDER, RATHER THAN JUST ADDING MORE OF THEM

and Samsung promising any HDRware before Christmas.

And you'll need content. HDR uses less bandwidth than 4K (2.5Mb/s as opposed to 12Mb/s) so Netflix could default to 1080p HDR with 4K as a premium option. Both Netflix and Amazon have promised HDR streams, but haven't said when they'll appear.

The first place to experience enhanced dynamics might be the cinema: new Dolby Vision picturehouses combine HDR and Atmos sound to create IMAX-rivalling gloriousness. Star Wars: The Force Awakens, due out in December, has been tipped as a candidate for in-cinema HDR.

VITALSTATS

YOTA BE WORTH **ANOTHER LOOK**

YotaPhone 2 Limited Edition

£440 / yotaphone.com

A former bugbear – not being able to use Gmail on the back screen – has been put down

No lie: we gave the dual-screened YotaPhone 2 a mild drubbing last time we saw it. But someone was obviously listening, because now there's a refreshed edition...

We said the E Ink screen was awkward to use.

Yota engaged the help of no fewer than 5000 users to critique the system, leading to Yota Elnk Technology Integration (or YETI) 2.0. Visual consistency between the front screen and back screen has been improved and the interface has been flattened so that all your customisable Elnk screens are on one 'level'.

We said its OS was dated.

Goodbye Android 4.4 KitKat, hello Lollipop 5.0. The frontscreen experience – still the same punchy 5in, 1080p AMOLED - feels a lot more modern with Lollipop's sleeker design, and the whole caboodle barrels along despite having the same Snapdragon 801 chip as the original YP2. Even the 8MP camera seems sprightlier.

We said it looked out of touch with modern phone design.

But modern phone design has come to the YotaPhone. A bit. The back of the white YP2, with its curved Elnk screen, brings to mind the front of a white Samsung S6 Edge. Unfortunately the front of the white YP2 - still black looks a little underwhelming.

We said it would be good if it worked as a TV remote.

And now it does, with the YotaRemote app for Wi-Fienabled LG and Samsung smart TVs. Other new back-screen apps include an e-reader app (though you can still 'mirror' Kindle or Play Books from the front screen), full-screen social networking, naturally, and new to-do listing, sports and fitness screens.

We said it was too expensive.

It was £555. It is now £440.



This softkey lets you mirror whatever you're looking at on the back screen

YOU OUGHTA ORDER THIS YOTA FOR YA DAUGHTER, MR PORTER

Panasonic

MASTERING THE MAGIC OF LIGHT



We believe that light is magic. And our passion is mastering its power to create a 4K range with the widest, most vivid colour spectrum imaginable. Our CX802 series televisions with 4K Pro Studio Master technology can recreate the most nuanced shades from light to dark - delivering the incredible detail the film-maker intended.

panasonic.co.uk/4KPro



MICE

If you ever bothered to ask it, your hand would love a new mouse

1Steelseries Sensei Wireless

Buying above your means can spell disaster. We refer to you to the number of ditched supercars. But this mouse, priced though it is, has super-low latency, is heftily weighted and can be cordless.

€160 / steelseries.com

2LogitechMX Master

Logitech's flagship is bedecked in shouty specs like its Darkfield Laser, 40-day charge and ability to switch between three devices. But it's the beautiful action of the side scroll-wheel that reveals its mousey mastery.

£80/logitech.com/uk

3 Razer Naga Epic Chroma Wireless

It'd be easy to get giddy about the Naga's 12-button, wildly customisable keypad for macros and special moves. But the best part is the 16.8 million colour options for the backlighting.

£115 / razerzone.com

4 Microsoft Designer Bluetooth Mouse

.....

Some others employ a name that suggests taking on a learned and/or deadly ally. This one is nicely groomed and affordable... but more suited to an afternoon in Hoxton than the fragging fields.

US\$30/microsoft.com

53Dconnexion CadMouse

It's one of those things you can't see at first, but now it's all you can see: the CadMouse's third button. Those who work with 3D models don't want an inaccurate scroll–wheel that clicks.

£95/3dconnexion.co.uk







WTF IS THE CYBER-POWER TRINITY?

Level with me: is this a spaceship?

Levelling with you: no, it's not a spaceship. The CyberPower Trinity is actually a fancy gaming PC for people whose tastes tend toward space—age chic. So it doesn't have a hyperdrive engine. You'll definitely be able to play Elite: Dangerous on it, though.

If it's not a spaceship, why does it look like a throwback to *Buck Rogers*?

Actually we were thinking more Battlestar Galactica, but there are genuine engineering needs being serviced by that triple-blade shape. Gaming PCs pump out a lot of heat, and this is considered a bad thing as, the cooler you keep one, the more you can push its limits. With three towers, the Trinity has three times the surface area and three times the fans, and runs at a lower temperature as a result.

Wouldn't keeping your PC in the freezer be easier?

Please go away and think seriously about how that would work.

Speaking of practicalities, I like gaming rigs with a lot of room. I need space and this doesn't say 'spacious' to me.

Wrong once again. The Trinity is compatible with big momma graphics cards like the Nvidia GeForce TITAN X and the AMD Radeon 9 series, as well as making room for more than three SSDs, a liquid cooling system and a full-length ATX PS2 PSU. The only component to suffer from squeeze is the motherboard – the Trinity will only work with Mini-ITX form factor boards.

Does this mean I have to faff about with component choices?

Not necessarily. You can just choose from its three distinct flavours: the Trinity 100, Trinity 200 and Trinity Xtreme, each with progressively more intimidating specs. The last in that list packs a 4GB GeForce 970 graphics card, over 2TB of storage and an Intel Core i7 CPU.



The beat is on SOUNDBRENNER PULSE

On the face of it, the Pulse is a wearable metronome for musicians. It has a vibration motor several times more powerful than that of a smartphone, backed up by switchable coloured LEDs. You can set the tempo by tapping or twisting or, for more precise adjustments, via the Bluetooth–connected app. Two strap lengths let you attachit to wrist, upper arm or leg to suit your personal and instrumental ergonomics. So far, so Santana. But there's another reason to dial up a Pulse from Indiegogo: it's the perfect thing for resetting your inner beat — for forcing you into a controllable rhythm when you arrive at the office a flailing maelstrom of bags, leaking coffee cups and irrational anger.

from US\$150 / soundbrenner.com



Two-way Wizbit GARMIN NUVICAM

"Ha-ha this a-way, ha-ha that a-way, ha-ha this a-way, my-oh-my."

So went the theme tune to magician Paul Daniels' children's TV programme Wizbit. Good times. And timeless, in that the same emotion can be attributed to the double-sided Garmin nuviCam. It sends your sat-nav ha-has that a-way, towards your eyes and ears, while simultaneously serving as a dashcam that a-way. It continuously records footage and — on sensing an impact — records, timestamps and geostamps the footage. But that's not all. That forward-facing eye also, apparently, warns youif you're too close to the car in front or parps if you're drifting out of your lane. Now that's magic. £300 / garmin.com/nuvi



The All-New Kia Sorento Made for perfectionists

Fusspots, nitpickers and the down right choosy, thank you. If it wasn't for your high standards we wouldn't have made a car as award winning as The All-New Kia Sorento. With great driving dynamics, leather upholstery, 360° around view monitor, smart power tailgate and smart park assist, it's enough to bring a smile to the face of even the hardest to please. Visit kia.co.uk to find out more. You make us make better cars.





Fuel consumption figures in mpg (I/100km) for The All-New Kia Sorento range are: Urban 36.7 (7.7) - 40.9 (6.9), Extra Urban 46.3 (6.1) - 57.6 (4.9), Combined 42.2 (6.7) - 49.6 (5.7) CO₂ emissions are 177 - 149 g/km.

A question of form PANASONIC HX-A1

Bless you. Still ruminating about the best action camera form factor, while your mates have ditched their five-year-old GoPros and are now iPhone Periscoping direct to their auto-awesome meerkats or whatever. But perhaps your waiting has not been in vain: this new Panasonic looks similar to its predecessor, the HX-A500, but lacks the bulky external display. All of your 1080p/30fps (or 480p/240fps slow-mo) video is kept within the A1's feather weight 45g waterproof housing. It's got Wi-Fi, natch, so you can view your action on a smartphone or tablet, and apparently you can wirelessly connect to bigger Panasonic camcorders to enable simultaneous recording of both you (filmed by a friend) and you (POV). The A1should be affordable, too, as cross-Atlantic rumours point at US\$200. Which still won't impress your mates, as they're using free smartphone apps. £tba/panasonic.co.uk



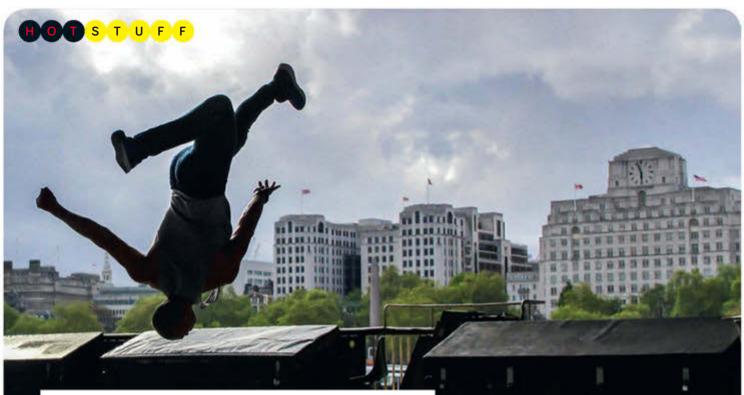






Izzy wizzy, make your booze fizzy **SODASTREAM MIX**

Like us, you probably took one look at this and thought: "OK, whichever megacorp now owns SodaStream has decided to give the almost-forgotten product a last huzzah, maybe pick up some sales from nostalgic fortysomethings. Looks like there's some kind of screen on there; probably drink recipes. God, I hope they haven't tried to make it into some kind of Internet of Things device." Like us, you need to dial the cynicism down a notch or two. And here's how: by learning that while, yes, there's a Mix app on which you can download drink recipes and send them to your fancy SodaStream via Bluetooth, there's also new technology involved. Whereas SodaStream of yore could only carbonate plain water, this new one has the capability to bubble up all sorts of liquids, alcoholic and non, without a messy explosion. Now don't you feel cleansed?



OUR MONTH

What the past 31 days have brought us by way of geekery



I MADE MY OWN PHONE OUT OF WOOD

Not in a highly advanced whittling class, but using Motorola's amazing Moto Maker site. You can pick colours and materials, including wood and leather — I went with teak and brass, which makes my new Moto X look like a very small luxury yacht. Nice.



Will Dunn editor / wood picker



I THING-COUNTERED A RARE HTC RE CAMERA...

...in the most unlikely of places, a Belgian punk festival. Obviously I didn't tell anyone, just quietly noted it down in my notepad next to the two Samsung Gear smartwatches that I'd previously spied in Weymouth.



Ross Presly deputy art editor / ex-mohawk



I FOUND OUT THE FUTURE OF MUSIC...

...at Brighton's Great Escape festival: lots of fan-funded records, crowdsourced gigs and all the best tunes you've never heard. Look out for the full story in our next issue, due out on 1 July.



Tom Wiggins deputy editor / future hound of music



I STARTED SENDING EMOJIS

Well, emojis and brief, inappropriate responses to all my PPI messages. There are hundreds of instant replies you can make from an Apple Watch, and every single one is ill-matched to me and my relationships. Which makes it more fun.



Will Findlater editor-in-chief / non-generic



I EMPLOYED A STUNT DOUBLE

I watched as much fitter people did backflips off walls at a Canon event in London. I took some pictures with fancy Canon cameras but then I got carried away and tried to do a flip. Banged up me knee pretty hard. I'll stick to taking photos and writing, I reckon.



Esat Dedezade staff writer / grounded



I PUT LYNYRD SKYNYRD IN MY POCKET...

...then jammed along by plugging my guitar into the Blackstar ID:Core BEAM, a practice amp that doubles as a Bluetooth speaker. 'Cos I'm as free as a bird now, and this bird you cannot change.



Richard Purvis production editor / free bird

oppo



Optimised for portability, PM-3 is the World's lightest closed-back planar magnetic design. It provides privacy and noise isolation and features high sensitivity and comfortable fit.

SOUND &VISION

Simply put, the Oppo PM-3 are my favourite closed-backed headphones currently available.

NEW

HA-2

Portable Headphone Amplifier & USB DAC



HA-2 is a compact headphone amplifier and USB DAC featuring ESS Sabre³² Reference ES 9018-K2M DAC chip and support for 384 kHz/32-bit PCM and DSD up to 11.2MHz.

Hi-FiChoice

A gem of a headphone amp/DAC at a very competitive price. Deserves to win plenty of friends.





YOUR MONTH JUN

The year's already half gone! Quick, get this little lot done...



80

MONTY PYTHON'S LIFE OF BRIAN

If you haven't already got it, buy the fancy Blu-ray SteelBook along with Holy Grail. The artwork looks ace, although the actual film print might well be the same one from the original Blu-ray. "He's not a remaster, he's a very grainy boy."



ISLE OF WIGHT FESTIVAL

FESTIVAL
Five little words: "Of course I will, dear."
But you gambled on Fleetwood Mac not really going on the road again. And now you have to go to the Isle of Wight with your Mac-mad partner for their only set of 2015.
Still, it's way more chic than Glasto.



RED BULL

RED BULL X-FIGHTERS Athens

As images of last year's Munich event show, X-Fighters is a lot more than just a stunt bike stadium tour. And this new round, in Athens, is to be held in a huge quarry. Should be a blast and, as part of a week-long Greek adventure (flights currently £150), a decent summer jaunt.



12

EUROPEAN GAMES

Baku, Azerbaijan We've all seen the Olympics; now see it's smaller cousin, the European Games! This year will feature more than 6000 athletes from 50 countries playing 20 sports, some of which will act as qualifying rounds for Rio 2016. Runs until the 28th.



23

BATMAN: ARKHAM KNIGHT

A two-week delay has put the wind up the games industry, but once Rocksteady polishes up a few details there's a lot to look forward to... including a huge open-world Gotham and a dancing-deathbringer Batmobile.



26

MINIONS

It's got Sandra
Bullock, Jon
Hamm and Michael
Keaton as voice
actors, and the
Dillinger Escape Plan
on the soundtrack;
and it's a yellowtinted spin-off/
prequel of something
that's lost its own
momentum. So
what could possibly
go wrong?

discover raumfeld.com













www.raumfeld.com



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True Wireless High Fidelity

You know the feeling - those butterflies in your stomach — its purest form accompanied by endless options from when you suddenly encounter something so perfect, the cloud. Discover German-engineered streaming it takes your breath away. That's Raumfeld: Sound in

speakers that breathe new life into your passion for music.



















WIN A YEAR'S FREE HI-DEF MUSIC PLUS A STREAMER & HEADPHONES

Isn't teamwork great? First we teamed up with our friends at *What Hi-Fi?*, and then both of us teamed up with music streaming service Tidal to offer 10 lucky winners a free 12-month subscription to its premium Hi-Fi tier, worth £240 each. Tidal offers 25 million tracks in lossless CD quality, and won a five-star rating from *What Hi-Fi?* See for yourself at **whathifi.com/tidal/review**

In addition, one winner of this joint competition will also get the award-winning Bluesound Node music streamer*, declared by *What Hi-Fi?* to be 2014's Best Music Streamer up to £600 – plus a pair of fabulous Sennheiser Momentum 2.0 Wireless Headphones. That's another bit of kit with a five-star review: whathifi.com/sennheiser/momentum-20-wireless/review

Nine runners-up each get an annual Tidal Hi-Fi subscription worth £240. You can enter on the *Stuff* website – see right.

* Bluesound Node supplied by Sevenoaks Sound & Vision

HOW TO ENTER

For your chance to scoop this triple treat of high-definition audio magnificence, just go to **stuff.tv/win** and answer this question:

WHICH HIP-HOP MEGASTAR AND ENTREPRENEUR IS THE DRIVING FORCE BEHIND TIDAL?

A ... Jay Z

B ... J Mascis

C... Jay & Silent Bob

HURRY!
COMPETITION
CLOSES
8 JULY
2015

Terms & conditions 1 Open to UK residents aged 18 or over. 2 Entries close 11.59pm, 8 July 2015. 3 Prizes are as stated. 4 Prizes are non-transferable. 5 Only one entry per person. 6 For full Haymarket terms & conditions see www.stuff.tv/legal Promoter: Haymarket Media Group, Teddington, Middx TW119BE sevenoaks



M SERIES

If you really care about music, you'll love KEF's M Series Hi-Fi Headphones. State-of the-art acoustics. Precision engineering. Total comfort. Cool design. Headphones for your heart.



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HOME IS WHERE THE SMART IS

Gadgeteers have been talking about connected, automated homes for a long time, but – as wireless connectivity becomes cheap and ubiquitous – the smarthome is at long last taking shape. Join us on a tour of the home of the very near, very cool future

FRONT DOOR

AUGUST SMART LOCK US\$250 / august.com

August's Smart
Lock and app make
your phone your
key, communicating
with the lock via
Bluetooth. This
means you can
give guests a selfdestructing virtual
key that'll only
grant them access
at a particular time.



WELCOME £tba / netatmo.com

This automated doorman clocks everyone who walks in using facial recognition, so when the kids get home you'll get a notification. It records, too, and has a night mode so they can't sneak in late and expect to get away with it.



To borrow a phrase from Heineken, Eero covers areas other Wi-Fi routers can't reach. It deploys a team of hubs around your home, creating a mesh network, so you won't get any annoying dead spots. That's quite important when everything inside needs a connection.

Words Tom Wiggins Illustration Jing Zhang





LIVING ROOM

iring up some surround sound speakers and a TV the size of an industrial solar panel used to be about the extent of it when it came to tech in the lounge, but nowadays your sofa can be a veritable Mission Control of comfy home automation.

Nest's Protect smoke alarm and Thermostat have now learned to talk to other gadgets. Nest doesn't just pick up on your habits and adjust your central heating accordingly, or send a notification to your phone if the smoke alarm is triggered – it can now communicate with Jawbone's Up activity tracker, so it'll know to turn the heating on if you wake up early, and turn Lifx lightbulbs into warning beacons when the Protect goes off (which works as a warning for anyone passing by and also helps you see in the dark if you have to evacuate); plus it can even receive GPS info from your car so the house will be

toasty when you get in from work. Just hopefully not from a fire, which would indicate that your Protect has stopped working.

There's also a Nest app for your Pebble and more partnerships with Philips Hue lightbulbs (see below), Withings' Aura (p52), LG's kitchen appliances and Kevo's smart lock. It all points towards a network of home tech that'll talk to each other — and more importantly, it'll do it even when you're not there.



\$200 / amazon.com

If you're concerned that nobody in your house ever seems to listen to you, Amazon's Echo might be just what you need.

Imagine Siri got evicted from your iPhone and took up residence in a robotic Pringles tube, and you've pretty much got the Echo.

It responds to voice commands, offering a hands-free way to check news, weather and sport scores; play music from your Amazon Music account or internet radio; set alarms and add stuff to your to-do lists; or just look up stuff on Wikipedia. Inside are seven microphones, so just say 'Alexa' to wake it up and it'll hear you even if it's playing music at the time.

There's also Bluetooth on board, so you can stream music from your phone or tablet, plus there's a 2.5in woofer and 2in tweeter inside — so it shouldn't sound like a musical Pringles tube.



PARROT POT £tba / parrot.com

No, not something in which to cook tropical birds, but a receptacle that makes it almost impossible to kill your plants. The **Parrot Pot comes** with its own built-in 2.2-litre reservoir, enough for a month of automatic thirst quenching. Sensors can detect how much the plant needs, and with a database of 8000 plants it won't drown your cactus or leave your hibiscus gasping.



PETCUBE \$200 / petcube.com

With the internet pretty much powered by pictures of puppies and kittens it's a wonder anyone would need to see more of their pets, but if your furry babies are more important to you than any real ones, this connected camera is nigh-on essential. Check on them, talk to them and even play chase with them using the built-in laser pointer when you're not home.



DYSON 360 EYE £750 / dyson360eye.com

Dyson's new robo-vacuum took a while to emerge, but it's clever. A 360° camera works out where it is in a room to make sure it doesn't miss a spot, while the companion app gives you more control than with other autonomous dust-munchers. Dyson Link (£free / iOS, Android) allows you to schedule sucking sessions and even view a map of its progress.



PHILIPS HUE from £50 / meethue.com

Philips' app-

controlled, colourchanging light bulbs now have an extra trick up their LEDs that mimics some of the functionality you get from pairing them with an Ambilight telly. An app called Hue Camera (£3 / iOS) checks your iThing's lens to analyse your TV screen and uses the hue, saturation, luminance and more to recreate the colours with your Hue bulbs.



KITCHEN

f the techiest thing in your kitchen is the electric bread knife you got from the Innovations catalogue in 1998, it's time to rethink which gadgets grace your galley.

Appliances are now becoming much cleverer, with Jenn-Air's smartphone-controlled oven at the head of the table. Integration isn't half-baked: iOS and Android apps will give full control, as well as unique features like the Culinary Center, an interactive system

giving guidance; it offers more than 30 food options, based on clever algorithms taking into account food type, desired 'doneness' and cookware.

Elsewhere, Bosch is baking HomeConnect tech into its appliances, so your new fridge, dishwasher, washing machine and dryer are all online. That'll mean you can operate them from afar using an app and check the contents of your fridge from the supermarket via its built-in

cameras. Other companies plan to integrate the tech too. You'll never have an excuse for forgetting to buy milk again.

Of course, if all of that sounds a bit too much, you could always just invest in one of Heston Blumenthal's Sage toasters, which are powered by nuclear waste. Not really, it's just a nice toaster with buttons to quickly check on your gradually browning slice of bread. Because if there's one thing tech should fix, it's a decent breakfast.



\$230 / anovaculinary.com

Sous vide might sound like the name of that old teacher you didn't pay enough attention to in French class, but if you had you might know it actually means 'under vacuum'. It's a method of cooking that involves sealing food in bags and cooking it slowly in warm water — and Anova's Bluetooth—equipped Precision Cooker adds a pinch of tech.

It heats and swirls the water around like a whirlpool to ensure a consistent temperature throughout the pot, plus it comes with an app (obviously) that lists a load of recipes to choose from, automatically setting the time and temperature based on what you pick. Or if you want to go off-menu and cook something exotic – puffin, for example – you can adjust it yourself. What comes out should be evenly cooked and juicier than the tales from Del Monte's stag do.



MELD \$130 / meldhome.com

You don't have to replace your entire cooker to get some robo-help with your dinner. Meld's two-part chef's assistant consists of a smart knob (stop sniggering) that attaches to the dashboard of your cooker, and a sensor that goes in the pot. Tell the app what you're cooking and it'll monitor the temperature and adjust the heat as required.



COFFEE £150 / firebox.com

Trying to get a stressed-out barista to pay attention to your highly specific coffee order is a lot tougher than just telling your phone. This grinder 'n' brewer is controlled with an app that allows you to alter the quantity and blend from your bed. It even supports IFTTT, so you can have it start blending the second you start to stir in the morning.



BUTTON from £free / amazon.com

You've run out of dog food. Again. But before you feed Rupert another one of the kids, consider sticking one of Amazon's Dash **Buttons to the** kitchen wall. Each one is tied to a particular product – such as washing powder – and when you've nearly run out, you press it. Your Prime account then automatically orders and dispatches more.



INVOXIA TRIBY £tba / invoxia.com

Not everything about cooking. Invoxia's Triby isn't a misspelled hat, it's a kind of digital post-it note that lets you use the accompanying app to leave written messages on its 2.9in E Ink display, use it as a handsfree kit or stream music from your phone; plus it's magnetic, so you can stick it to your smart fridge and make it that little bit smarter.





AND ANOVA THING...

- ONF Sous vide is all about accuracy, so the Precision Cooker can control the temperature right down to the nearest tenth of a degree.
- TWO The Precision Cooker is placed at one side of the pot and held in place by an adjustable clamp, so you can use any size container.
- THREE You can sous vide your way into a drunken haze with the app's cocktails, including baconinfused bourbon and limoncello.



3D printers normally churn out small plastic knick-knacks or vital cogs for complex machinery, but what if you could use one to turn your kitchen into a delicious production line that'd make even Willy Wonka jealous?

XYZPrinting wants you to do exactly that with its kitchen-counter-friendly 3D food printer. You fill it with dough rather than plastic, which is squeezed out into oven-ready creations, including dinosaur-shaped treats and pastries.

It's cloud-based recipe book means you don't need to be Mary Berry to sculpt them (though you will need to do the actual baking). Users can even submit their own creations to XYZ's database — where they are vetted, presumably to prevent genital-shaped biscuits flooding the world's office bake sales.







ANOVA

READ





ith the last signs of life finally leaving the corpse of 3D TV, it's time to prepare your living room for the next revolution, and 4K has its feet well and truly under the coffee table (the new lkea one, with the wireless charging panels). So what other ear and eyeballpleasers can we expect to take root in the lounge in the not-too-distant future?

Virtual reality might be gaming's next big thing but, for socialising

in the living room, things might sometimes need to be a little more inclusive than disappearing inside a helmet on a journey to an entirely new world.

The Immersis (€1800, immersisvr.com) is an augmented reality projector that projects way beyond the limits of your TV; it also uses 3D mapping to incorporate the surrounding walls. And it's not just for gaming either: you can also feed it videos and photos to give them the all-walls

treatment. It's Full HD rather than 4K, which means there aren't as many pixels to play with as we'd like, but if your telly's too small and you don't have a wall suitable for a standard projector, then an Immersis could fulfil all your home cinema dreams. Unless you have £1.8m lying around, in which case you can upgrade those dreams to include your own IMAX screen, complete with dual 4K projectors, a proprietary surround sound system and 200 pre-loaded films.



SHARP AQUOS BEYOND 4K ULTRA HD TV

£tba / sharp.co.uk

Sharp heard you like pixels, so it put pixels inside its pixels so you can pixel while you pixel. What that really means is there are 66 million sub-pixels beyond the standard 3840x2160 resolution, which boost it to something approaching 8K. And you thought finding stuff to watch in 4K was difficult..



3D SOUND LABS NEOH €260 /

3dsoundlabs.com

Try wearing your surround sound system and you'll end up with a very cumbersome hat, so these headphones are probably a better option. They use motion sensors and head-tracking tech to replicate surround sound that reacts to where you look. It currently only works with iThings, but Android and PC support is on the way.



DEVIALET PHANTOM €1690 / devialet.com

Still playing CDs on an old hi-fi? Get yourself to a museum, grandad. **Devialet's Phantom** might look like an ancient contraption that holds the key to eternal life but its Wi-Fi streaming from phones, PCs and Macs, or direct from the web. hi-res capabilities and multiroom potential prove it's definitely more interested in bringing life to your ears.



ZAPPITI PLAYER 4K €280 / zappiti.com

Chances are there'll never be a disc format for 4K, so streamers such as this one will be your route in. Netflix's 4K shows only work on certain TVs for now but the Zappiti Player's Android OS means it'll be ready when they are. In the meantime its hard-drive hole takes anything up to 6TB - plenty of space - and it also supports Dolby's sound-bouncing Atmos audio tech.

ROTO VR

from £200 / rotovr.com

As long as most of us have furniture, pets and other humans clogging up our homes, dodging zombies with a VR headset on is going to be problematic.

Roto VR puts you on a motorised pedestal that physically rotates you when your character does, reducing the risk of motion sickness A footpad adds pedals to control movement braking in a car, plane or spaceship – although the Roto VR remains in place rather than scooting back and forth across the carpet like a rideable Roomba. A table can also be added for a steering wheel or other input device – perfect for EVE: Valkyrie.

Whatever you're playing (or watching) can also take control of the plinth's movement and spin you around to face whatever ghastly scene the director wants you to. At least you can have a little sit down afterwards.



ALTERNATIVELY...

MMONE £tba / mm-company.com

Got room to swing a Maine Coon? Then you'll want this part gaming peripheral, part theme-park ride: a VR chair that works with an Oculus Rift and rotates in every direction.





WE'RE ON THE ROTO NOWHERE

ONE You can remove your office chair's wheels and clip it into the Roto VR. If nothing else, it's a good way of getting through that midafternoon lull without resorting to biscuits.

TWO Most VR headsets still require you to be tethered to a PC, so isn't that going to cause a tangle? Not with Roto VR's special adapter, which has a slip ring

THREE It's also been future-proofed with Bluetooth, so when wireless headsets emerge you'll still be able to use them with the Roto VR. That also means you can use it with Samsung's Gear VR straight away.



If the thought of ripping up your home cinema system and starting all over again for Dolby Atmos sounds as appealing as a *Twilight* marathon with Nigel Farage, there's soon to be another, much less drastic way.

Unlike Atmos, which requires some fancy new upward-firing speakers in your setup to bounce sound off the ceiling, DTS:X offers similarly object-based surround sound, but does so using your existing speakers. Chances are it won't have quite the same sense of immersion as Atmos, but it'll require a lot less mucking about.

It also means you won't have to rearrange your entire lounge to ensure you can laserposition the speakers in exactly the spots the Atmos system dictates. According to DTS, its remapping engine can cope with pretty much any placement as long as it's within a hemispherical layout, plus it'll work with anything from 5.1 to 11.2 configurations. Onkyo, Denon, Marantz and Pioneer are already on board, with firmware updates to existing amps on the way this year.



BEDROOM + BATHROOM

ou spend a third of your life asleep. If you think about it, that's a lot of time wasted that could be spent fiddling with your phone, so you owe it to yourself to make sure there's enough tech in your bedroom that'll allow you to do plenty of phone-fiddling when you wake up in the morning.

Right now the bedroom is dominated by tech that tracks your slumber, monitoring your tossing and turning, and doing its best to help you to get a good night's sleep.

What began with simple apps that monitored how well you slept using your phone's built-in sensors, such as Sleep Cycle for iOS and SleepBot for Android, has developed into far more sophisticated standalone gadgets. Wearables such as Jawbone's Up and Misfit's Shine took it to the next level, but if you prefer to spend your nights au naturel there are now gadgets that don't

need to cling to your body to know what's happening.

Withings' Aura is a bedside lamp that connects to a sensor positioned under the mattress, feeding back info on your sleep patterns and activating special lighting patterns to help you wake up naturally, rather than as if you've just had a gorilla slide into bed next to you. It also works with Nest, so it'll tell your heating when you've gone to bed and it's time for everyone to chill out.



£300 / amazon.com

There are few things creepier than the thought of someone watching you while you sleep, but that's exactly how ResMed's S+ works. It sits by your bed and observes your slumber without any contact whatsoever, using sonar-type tech to work out when your body moves, picking up everything from rolling over to the expansion of your chest as your breathe in and out. It's like living with a medically trained, highly conscientious bat.

The S+ also has sensors to monitor light, noise and temperature in the room, which it combines with your movement data to produce a personalised sleep report that you can view on your phone with the S+ app (£free / iOS, Android). The app will then use that info to offer you tips on how to kip better - ones that don't include your usual series of pre-bedtime brandies.



Yes, it's another sleep tracker, but Luna's clever mattress cover does so much more. It's split into two zones, so it'll track two people at once and provide two sets of stats, plus you can warm both sides of the bed to different temperatures and preheat it from your phone, like the world's most comfortable oven.



LIGH I £tba / sony.co.uk

Convergence has slowed down somewhat since the smartphone became the 21st-century Swiss Army knife, but Sony has combined a speaker with a lamp and kicked the whole thing off again. The sound is pushed through the glass so when it's not playing tunes it looks like any normal lamp. What next, a sofa that's also a blender?



KOLIBREE £tba / kolibree.com

Ever since members of the Tang Dynasty attached pig bristles to a stick in the 7th century, the toothbrush hasn't really changed all that much – until now. Kolibree's clever peg-shiner connects to your phone over Bluetooth and sends info on how you're brushing to its app, which also includes games to encourage kids to keep their teeth clean.



WITHINGS SMART BODY ANALYZER

£130 / withings.com

As its name suggests, the **Smart Body** Analyzer does way more than just tell you you've eaten too many Jaffa Cakes. As well as your weight, it'll measure your heart rate through your feet, work out your body fat and BMI, and even monitor the quality of the air, before feeding everything back to its Android or iOS app.



ALTERNATIVELY...

KIDS' ROOM

THE ULTIMATE NIGHT LIGHT

ONE The S+ also alarm clock that'll use your sleep pattern to wake you up when you're not in deep sleep.

SLEEP NUMBER SLEEPIQ KIDS

Complete with a monster detector, the SleepIQ Kids monitors how they sleep, and pings your phone when they wake up, just in case they don't tell you.



HUGONE

€180 / seven-hugs.com If you'd rather not replace the whole bed, HugOne's multiple sensors take care of sleep-tracking for the whole family. Place one on each bed and they all feed back to the hub, recording temperature and humidity info too.



DROPLET

from \$19 / dropletlife.com A bit like Amazon's Dash Buttons (but nothing to do with the Droplet over the page), these are designed to be attached to things you forget about, such as pills, inhalers or the kids' toothbrushes.





GARAGE + GARDEN

f your Wi-Fi struggles to reach further than the walls of your house then you might think the garden, garage and shed would be a tech-free zone, but that doesn't mean greenfingered gadget fans should board their ride-on lawnmowers and disappear into the sunset (mainly because there are plenty of robots that'll do that job for you now). The garden is a prime spot for tech because it's exactly the kind of place that's crying out

for some sort of automation — it doesn't require constant attention, but if left alone can quickly get out of hand.

Take Edyn, for example, which works a bit like a fitness band for your garden. With the solar-powered sensor stuck in the soil it monitors light, humidity, temperature, soil nutrition and moisture, and goes all Alan Titchmarsh on the accompanying app to recommend what kind of plants are most suited to your

garden, or when the ones you already have need some TLC.

Once you've planted them you can take it to the next level with the Edyn Water Valve, which, on instruction from the app, can be used to control when your garden gets watered; plus there's a whole dashboard of facts and figures about the state of your soil.

But it's not just the flower beds that can benefit here. Here's our pick of the latest garden and garage tech...



\$300 / smartdroplet.com

When you live in a country that's known around the world for being soggier than a beaver's breakfast, there might not be huge demand for a plant-watering robot, but Droplet's so smart you'll be tempted to buy one even if you're halfway up a high-rise.

Plug it into your hose, tell the app where your plants are (and what type) and the Droplet will take it from there, firing jets of water out to each one that's within its 30-foot range. Its onboard Wi-Fi taps into online weather info so it knows when to water. And it's not just about convenience: because it's so much more accurate than a normal sprinkler it uses up to 90% less water, plus it can show you data on exactly how much water went where, which will give you something exciting to discuss next time you bump into Keith from next door.



GRILLBOT \$130 / grillbots.com

After a hard day mining delicious sausages at the culinary coalface that is your barbecue, the last thing you want to do is clean the thing. But Grillbot does. It skitters across the cooking surface for up to 30 minutes, using three rotating, motor-driven wire brushes to scrub it clean. It even works if it's still hot. Well, why should the robo-cleaning fun anyway?



RAPERE £tba / rapere.io

If faithful Fido feels a bit Dog 1.0 when it comes to home security, don't worry: soon you'll be able to have your own guard drone to protect your property from flying snoopers. The Rapere can detect an unidentified airborne intruder, hover above it and drop a tangle line into its props, perhaps for Fido to retrieve when it hits the ground. There's life in the old dog yet.



LG TWIN WASH £tba / lg.com

It's hard to get excited about a washing machine, but with its hidden second drum you can at least pretend LG's Twin Wash system is hiding top-secret material. In reality it's more likely to contain nothing more than your dirty pants, but with built-in Wi-Fi allowing you to check its progress mid-wash and notify you when it's done, you might not want to hide this one away.



PICOBREW ZYMATIC \$2000 / picobrew.com

You've grown your own veg, baked your own bread and milked the odd llama but the holy grail remains: brewing your own beer. Unlike the chemistry set that's usually required, PicoBrew's internet-enabled **Zymatic system** automatically adds the ingredients based on the recipe you've chosen and brews it up in about four hours, then starts fermenting.







Why communication is the key to the robo-home

etween the start of this feature and the page you're reading now, there's been a lot of very capable gadgets that allow you to take control of your home in ways never before possible, but they also have one thing in common: they don't really work that well together. While we've obviously come a long way from the electric bread knife and other wonders of the Innovations catalogue, much of the home tech available at the moment exists in a world of its own, unable to communicate much further than to an accompanying app on the phone in your pocket.

But there are some signs of a change. Nest (1), now owned by

Google, has opened up its API to allow other tech, such as Philips Hue lightbulbs and August's and Kevo's (2) respective smart locks, to talk to its thermostat and smoke alarm so they know when you're not there and react accordingly; while Apple's forthcoming HomeKit (3) platform is compatible with Honeywell thermostats, Withings' connected-home products (4) and many more to come.

HomeKit was announced at last year's WWDC, Apple's big developer shindig, and chances are this year's event will deliver more info on exactly how far its tentacles will stretch, how it'll work with Siri and your Apple Watch,

and when it will be available. Having had a year to work on apps and compatible products, the hope is we'll see some Apple-flavoured home tech in the next month or so.

THE HOME STRAIGHT

But Apple is hardly renowned for playing nicely with others, and that means Nest won't be on the list. Some products will work with both platforms but the problem is the systems themselves won't work together. What's developing appears to be a classic tech format war between the two platforms, and the only people who benefit from those are the winner's accountants. There are other competitors too: the AllSeen Alliance has over 140 backers for its AllJoyn system, including Qualcomm, LG and Sony, and the Open Interconnect Consortium is backed by Intel and Samsung.

What we're left with is (at least) four different systems vying to become the universal standard for connected home kit, each with its own manufacturers attached albeit with some crossover. Until the whole home is speaking the same language we'll never be able to make the next step towards genuine automation, and gadget fans like you and me won't be able to take advantage without fear of backing the wrong horse.

If a house really is a machine for living in, the engine's coughing and spluttering because nobody's quite sure what to fuel it with... but after a bit of tuning we could soon have it purring sweetly.













App:roved



Earth Primer

But if you're already on the App Store you'll enjoy this title, which is a free-form mini-Populous, blow gales. Perfect for kids of their 20s, 30s and beyond).

Stuff says ★★★★ £7.99 / iPad



HAPPY

The Google-owned image editor returns with a major overhaul, boasting Material Design that looks smart on Android if a bit weird on iOS. Snapseed retains its usability, though, and it's easy to add filters and make basic adjustments to photos. This adjustments to photos. This update greatly increases the app's power through non-destructive effects — at any point you can delve into your edit 'stack' and tweak or delete a step. Given the absence of a price tag, there's no reason not to give it a try.

Stuff says ★★★★ £free / Android, iOS



Implosion: Never Lose Hope

Implosion developer Rayark aims to bring AAA console goal, but this is certainly a fab-looking slice-and-dice action visuals shine on smaller displays won't replace your PlayStation but the gap is closing.

Stuff says ★★★☆



Carrot Weather

Stuff says ★★★☆













TRUE





Flame Orange? Relish Red? Autumn Amber? Whatever your colour, since 1965 Autoglym has been enhancing the paintwork of cars and allowing all colours to radiate through.

Scientifically proven to reveal the full spectrum of light for your eyes to enjoy. Only Autoglym delivers superior colour refraction. There will never be a dull moment in your life. Celebrate True Colours with Autoglym.

To receive a complimentary bottle of our new Bodywork Shampoo on orders over £25 enter code 'MHBWS' at checkout.







Meet the future of the laptop

Apple melds the portability of a MacBook Air with the screen of a MacBook Pro... there might be some compromises, but you're still going to want one

from £1050 / apple.com

It may not be ready to replace the Pro or Air versions just yet, but the design of the MacBook 12in makes everything else look plain old. It packs in a beautiful Retina display despite being smaller than the already tiny 11in Air, and at 920g it's even lighter.

It uses one of Intel's new Core M processors and, as a result, isn't guite as powerful as an Air or Pro. but unless you're doing some serious processor-straining you won't notice. It has a nine-hour battery life and can even handle recent games if you tweak the graphics settings.

Is this the perfect laptop? No, there's certainly room for improvement. Aside from the headphone socket there's just one connector: it's a new USB-C port, and it doubles as the power socket. Want to plug in a mouse? You'll need an adapter. Ditto for an external display.

The keyboard is shallower too; it's crisp as a frosty morning but takes some getting used to. Can you live with these little niggles? Yes, of course you can.

1 Sounds bigger than it looks The MacBook 12in has amazing new speakers, with a grille that sits just above the keyboard. This laptop may be tiny but it sounds bigger than even the chunkier Pro versions. Your tunes sound like they're expanding out way beyond the laptop's sides. Impressive stuff.

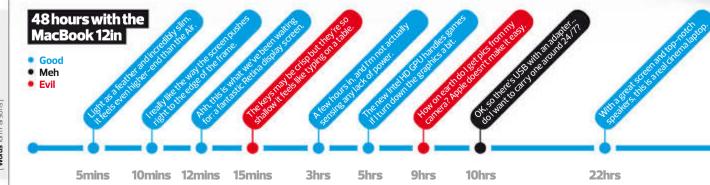


2 Telly-topping Retina

A 12in screen of 2304x1440 pixels is sharp enough to earn Apple's Retina display badge. This is one seriously nice screen. Almost every aspect is top-notch: colour, contrast and top brightness. There's a good chance it's even more pixel-packed than your TV.

3 Futurific trackpad

The keyboard and trackpad both have a new-for-2015 design. This is the only MacBook to get the ultra-crisp slimline keyboard, while the trackpad is pressuresensitive. Press harder and you get a secondary deep 'click' that unlocks new features in apps. It's a true next-gen trackpad.





4 Lost connection

So how do you deal with a laptop with no connections? It's not straightfor ward, but you can get a USB-C to USB adapter for £15. This'll let you plug in a mouse, a USB card reader, whatever you like. Get a USB hub involved and you'll be completely sorted.

5 It matches my phone

Unlike previous MacBooks, the MacBook 12in comes in three colours, not just 'naked' silvery aluminium. You get no points for guessing the inspiration of the grey and gold versions you now have to agonise over — these are exactly the same colour options as the iPhone 6.

24hrs 26hrs 28hrs 29hrs 44hrs 47hrs

Techspecs

Screen 12in IPS LCD, 2304x1440 CPU Intel Core M 1.1GHz GPU Intel HD 5300 OS Mac OS X Storage 256GB or 512GB SSD RAM 8GB Connectivity Wi-Fi 802.11ac, USB-C Dimensions 280x196x13mm Weight 920g

Going deeper underground

Don't let its clean, smooth looks deceive you... there's a lot more going on beneath the surface



Butterfly buttons

Under those keyboard keys is a new mechanism. Rather than a scissor, it's butterfly-shaped so that the keys don't wiggle. They may be shallow but they're some of the most secure laptop keys ever.



Battery-packed

Open up a MacBook and you'll see it's a technical marvel. The logic board is absolutely tiny, letting Apple fill the casing almost entirely with battery. It's stacked up in thin layers letting it fill every nook.



USB Power

Meet USB-C. This is the future of USB. It can take up to 100W of power, letting it double as the power socket. Most importantly, though, you can insert it either way round. Finally.



Feel the Force

Beneath the glass Force
Touch trackpad are both
pressure sensors and a
Taptic engine that provides
the clicks that feel just like
physical ones. The days
of old fashioned hinge-y
trackpads are over.



This is a fantastic ultraportable laptop. I'd love a little more keyboard travel, and one USB port or SD card slot would be great, but I'm prepared to live without them for everything

else the MacBook does so well. If you don't feel the same, go Pro and be happy. Make no mistake — this is the laptop you buy out of want, rather than need. @TomParsons

STUFF SAYS ****

It's contentious and wants you to change, but this MacBook heralds a bold and bright future for laptops

TC Olle M9

IT'S PLAYTIME

Beautifully designed with an ear for rich sound and an eye for stunning photos, the new HTC One M9 helps you capture every bit of the action

ou've just led your team to victory and you feel like Bobby Moore holding the World Cup. All you need is to capture the moment in all its glory.

And an HTC Fives tournament was the perfect opportunity to put the HTC One M9's picture power to the test.

This sleek, innovative phone is the official smartphone of the UEFA Champions League – but you don't have to be a superstar to look good through its lens. The M9 lets you remember all the goals, the bicycle-kicks and the in-off-the-crossbar triumphs (plus the muddy faceplants) in ultra-natural detail with its 20MP main camera – while HTC's unique UltraPixel tech in the

wide-angle front camera lets you take low-light touchline selfies without losing detail... and without using a daft selfie stick.

Of course, football is all about action – perfect for the M9's 4K video abilities. You can even shoot 1080p Full HD from the front camera.

And when it comes to editing pics, you're covered – 20MP is big enough to crop in on the bits that matter, while a full squad of editing tools lets you apply effects in one press.

On top of all this, the M9 is super intuitive and customisable – your home screen surfaces the apps you use most, and HTC Themes lets you change the look of your whole phone, right down to colours, fonts and app icon shapes.

19 MINUTES

BEAUTY IN DESIGN

Dual-tone all-metal body and mirror-polished sides, all crafted from a single aluminium block. The HTC One M9 isn't just breathtaking to look at: it's crafted to the contours of your hand. Let your friends stare. Don't worry – you'll get used to it.



37 MINUTES EDITOR'S CHOICE

So, you've captured that perfect shot of your friend's *Macarena*-inspired goal-celebration. Make it even perfecter by running it through the M9's editing tools, which include Shape, Prismatic and Double Exposure effects.





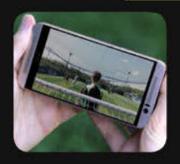






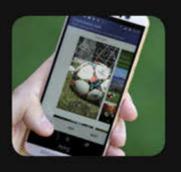


Football is about action – so capture it all in 20MP glory... and 4K video



65 MINUTES **MAKE SOME NOISE**

Create a cinematic experience with HTC BoomSound™. The front-facing stereo speakers serve up Dolby Audio™ surround as it was meant to be heard, and with BoomSound™ Connect you can play different tracks on speakers around your home.



82 MINUTES **GET PERSONAL**

Express yourself with the phone's huge range of personalisation options. The Sense Home Widget detects your location and recommends helpful apps and info, while Themes matches wallpaper,









[Words Lindsey Baker, lindseybaker.co.uk Photography Matt Beedle]











THIS IS NOT A WATCH

It's 689 calories burned this morning with 4,300 songs at my control. 5 perfect group selfies at the party with 25 Facebook notifications the next day.



ALCATEL onetouch.















https://www.facebook.com/ALCATELONETOUCHuk



https://twitter.com/ALCATEL1TOUCHUK

Top of the 'bots

If you're upgrading this year and you're not wedded to your iPhone, you need to read this: we've tested the best Android phones in the world and picked a winner

ere it is, then: the best phone in the world. All the big manufacturers have set out their wares for 2015, and one of these four is set to emerge as the new champion.

So if you have a contract to renew, or just £500 sizzling a hole in your pocket and a thirst for new gadgetry, these are the names to consider.

Smartphones are still improving each year, and in all the right ways. Gimmickry has been cast aside for power, upscale design, superb cameras, and even the occasional bit of leather for those who like things a little more, er, leathery. And while there's still a lot of support for Apple's wonderphone in the Stuff office, it's in the Anroid arena that the real competition takes place, where new and occasionally crazy technology becomes real, and where, ultimately, you'll find the world's most advanced device. We've spent weeks obsessing over these superphones, and this is what we found out.

1 HTC One MS

Could the M9 be your best M8? With a hugely improved camera, overhauled software and a nicely updated design... M-aybe.

2 Samsung Galaxy S6

Plastic has been traded in for metal and more glass than a doubleglazing salesman's garage. It's the classiest Samsung to date.

3 LG G4

Leather or plastic? LG's offering an interesting choice of finishes this year, plus an even better camera than the laser-eyed G3.

4 Huawei P8

The outside bet — slim as a budgie's wrist and clad in light aluminium, the P8 is a premium superphone that costs less than the others.



Thinner than an iPhone 6, and a great deal cheaper

The Huawei P8 may not have the design personality or some of the final little finishing touches of the best from Samsung and Apple, but this is one fine-looking phone. What's more, it's a finelooking phone that costs £100 less than the Galaxy S6.

This Huawei is a supremely thin (6.4mm) aluminium Android with 4G, microSD and an insanely pocketable frame. For bragging rights there's no fingerprint scanner or other such extras, but it will still impress onlookers as only a top-end phone can.

Anything to complain about? The software is quirk-central, as we've learned to expect from Huawei, and you'll want to customise it. The 'Emotion' UI embraces the wonky and

weird, which you'll find either charming or confusing.

Parts of the P8's octa-core brain haven't been quite as well optimised as some of its competitors. In regular use it lasts a respectable 1.5 days, but in our video test we only squeezed seven hours out of the thing; the Galaxy S6 managed 14 hours. At other

times, though, it outperforms the rest

So, it's not great for movies on transatlantic flights. For the odd bit of Netflix, however, the battery will hold up and the solid 5.2in 1080p screen will more than do the trick. The P8 doesn't quite get the level of perfection you'll find elsewhere, but it does save you a bundle of cash.

HUAWEI P8 £400 ★★



Metal chocolate bar

Gold, silver, black? There's a choice of P8s, and each version is carved out of cool, hard aluminium. This phone feels pretty good, but as with any hard-edged rectangular design, it feels a bit more severe than the others. So, do you want slim or smooth?

There are big bonus points for the microSD slot, and that slim frame is impressively twodimensional. Still, the design is derivative, there's no fingerprint scanner and no universal remote IR blaster. It does put the power button within easy reach of your thumb, though.

CAMERA **Good hit rate**

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The P8 has a 13MP sensor with optical image stabilisation (OIS), which gives it good lowlight skills. It's a reliable pointand-shoot that makes it easy to get good pictures, although colours in the finished images can be quite unruly.

Full HD: just enough

This year some phone-makers decided they didn't need QHD resolution. Huawei was one of them. The P8 has a 5.2in Full HD screen; you get good colour, contrast and sharpness, but some of the other phones here are even stronger.





OS AND APPS

Mixed emotions

Heard of Emotion UI? It's how Huawei puts its stamp on Android – version 5.0 (Lollipop) in this case. It's a bit odd, dumping the secondary apps screen in favour of iPhoneesque home screens, and adopting a strange colour scheme. You can customise it; you'll probably want to.

The supplied lock screen, wallpaper and so on made us wince, but fortunately the P8's themes make facelifts a cinch, and there are several decent themes pre-installed. So why did Huawei plaster it with such a dodgy default one?







The successor to last year's finest Android

With so many Androids out there, how do you stand out? The answer, according to LG, is to make your nice new phone look like a nice new wallet. Yes, we're talking real leather, and in a muted rainbow of colours to go with any handbag. For a bit less cash, there's also a plastic version.

Aside from its cow-flavoured coat, the LG G4 has rear buttons

instead of side ones, and a 5.5in screen that's a bit more cinema-grade than the other phones here. Great for gamers, great for Netflix fans.

As a result of enjoying this screen, though, we've found the battery life to be a bit ropey. You don't have to try hard to drain it in a day. And for all the bodywork flashiness, it doesn't feel quite as

classy or expensive as the Samsung or HTC rivals, especially if you have the plastic version.

So, who should buy the G4? The larger screen counts for a lot, and while the interface isn't starlet-pretty, it doesn't pull any silly moves like the Huawei. Another major plus point especially for anyone with a big music library - is that LG has

decided not to chop out the microSD card slot.

Aside from its tendency to run out of juice pretty quickly, we've had a good time with the LG G4. The camera is great, doing battle with the Galaxy S6 for the title of best phone camera this year. A decent sensor and a super-fast lens combine to work wonders every time.

LG G4 £500 ★★★★★



DESIGN **Under the leather**

After the plasticky-feeling G3, LG has decided to offer a G4 that is, like our favourite turtle, a leatherback. Even the plastic version is injected with ceramic for a slightly snazzier feel. Get down to its core, though, and not much has changed.

The G4 still uses a waferthin backplate that doesn't feel as solid as unibody metal or glass. At least you can replace the battery easily and use a microSD slot, though. As usual for LG, the power and volume buttons sit on the back rather than the sides. It feels weird at first, but it works.

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Sharper than cut glass

In the brutal game of Tech Top Trumps, the LG G4 just beats the Galaxy S6 with a 16MP sensor and f/1.8 lens, which give it slightly better low-light skills. In real life, though, we found the G4's camera just a little bit slower.

Ouantum LCD

The LG G4 has an LCD screen that offers searing QHD resolution and uses Quantum Display tech to supercharge the colours and contrast. It pops like crazy. One criticism: the reds pop a touch too much for our taste.



OS AND APPS

Sub-optimal Optimus?

Just as every Android UI under the sun is going smoother and more organic-feeling, the G4's Optimus UI sticks with what it knows. It's all sharp angles, and has a couple of interface bits that aren't necessary.

It could be prettier, but it's super snappy and lets you banish any bits of bloat you don't want to see. There are some extra apps you may want to nix, but some are useful, such as the universal remote app that lets the G4 control your TV.

Overall it's nice, but with a bit of fiddling it can be better.





The super-premium new face of Samsung

Now it's getting serious. After a few years of plastic phones, the Galaxy S6 is metal and glass

all round. It doesn't come cheap, but this is one of the best-feeling phones we've ever used – it's pleasantly smooth, despite being a dead skinny 6.8mm thick. There are sacrifices – the S6 loses the water resistance and microSD slot of its predecessor – but this is a

design to set any gadget geek's heart a-pounding.

Samsung has taken the Apple route this year, offering several S6 versions with up to 128GB of storage, and charging eyewatering prices for the more spacious ones.

With a frankly amazing screen that crams in 577 pixels per inch. a fantastic camera and improved

speakers, this is the sort of phone we've been hoping Samsung would make for years. It marries all the bits they have always been good at, and packages them in a design worthy of its specs.

One real surprise is the fingerprint scanner. It divided buyers in the Galaxy S5, but this new version is an absolute treat. It works perfectly, and sits right

where you want it under the Home button. Want to go to the next level? Check out the very pricey but also very futuristic \$6 Edge, which adds a curved glass front that displays notifications at the edges. It's a phone of the future and no mistake.

Still, for the average buyer the vanilla S6 is still royalty, even without the microSD



DESIGN **Gorilla class**

Finally, an expensive Samsung phone that feels like it. With Gorilla Glass 4 on the back and front, and aluminium on the sides, this phone feels amazing. It looks far better than the S5 too, although granted the camera sticks out a bit. •••••••



CAMERA **Smart shooter**

This 16MP camera is fantastic. It's fast, it's sharp and low-light performance is way better than last year. As usual the HDR mode performs minor miracles, making this the best phone camera we've used so far.

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OS AND APPS A bit of a Wiz

Not everyone loves Samsung's TouchWiz UI, but it's actually one of the simpler and cleaner takes on Android. This year there are themes that let you fiddle with its looks, but at time of printing, no particularly nice ones.

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SCREEN OLED + QHD = WIN

The best phone screen we've ever seen. An OLED, QHD-res display gets you incredible contrast and sharpness. At 'just' 5.1in it's pretty restrained in size, but then the Note 4 is there for big-screen thrills.

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The evolution of a modern design classic

Feeling a bit of deja vu? The HTC One M9 looks quite a lot like last year's One M8. All that lovely textured aluminium is back, making this perhaps the smoothest, fanciest–feeling Android phone of the year. It's a stunner.

This year it has a two-tone style, and comes in silver, grey or gold. HTC hasn't gone overboard with the gold one either – no bling nightmares.

One other bit HTC hasn't messed with too much is the speakers: the same pair of BoomSound front units we loved last year. Now there's a Dolby mode too, to squeeze a slightly larger sound out of them.

So what's changed? The camera is totally different. Rather

than a 4MP UltraPixel main sensor, the M9 has a 20MP one. That means much bigger images, but also worse low-light skills. (The UltraPixel camera has moved to the front to take over night-time selfie duty.)

Despite having more megapixels than any other on test, though, HTC's is not one of the top cameras. It struggles with reliability, often getting its settings a bit wrong.

Next to the LG G4 and Samsung Galaxy S6 you don't quite get the same grade of screen either: this is a 1080p Super LCD3 panel. It's still great, but if you're a screen fanatic you may prefer one of those others. You pay for the ultra-premium design here, so make sure you like it.



DESIGN Luxury time

It's not super skinny or particularly small, but the HTC. One M9 looks and feels great thanks to its luxuriously curvy back. There's a microSD slot, but no fingerprint scanner nor bonus bits. It cares more about acing the basics.



CAMERA Meter problems

Awesome megapixel specs aside, the M9's camera needs some know-how to get the most out of it. Make the effort to learn to use it and you'll get great shots, but it's not foolproof. The 4MP selfies are superb, though.

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OS AND APPS Talking Sense

HTC Sense is back, this time with themes. It's starting to seem pretty dated in parts, having looked the same since 2013, but it runs like a dream, and you can customise themes with colours from your photos.

••••••

SCREEN Big enough?

With the smallest screen of the lot and a resolution we now see in much cheaper phones, the M9 isn't immediately impressive. The difference isn't all that great, but you want the best when you're paying £500-odd, right?

The winner is... Samsung Galaxy S6

here's no doubt in our minds with this one. The S6 just gets so much right, with virtually no elements that feel like they could have done with a bit longer in the oven.

Camera, screen and build all ooze confidence and quality. This is a phone you'll be proud to keep in your pocket.

The only issues, and they are minor, are those bits where Samsung has been a bit too confident. Did it really have to get rid of the microSD slot? The money men undoubtedly said yes, but everyone else will wish they hadn't.

Battery life is also, well, normal. Not bad, but not amazing. However, it's not often we see a phone hit as many bullseyes as it aims for. This is the finest phone you can buy today.

Now add these

Samsung Galaxy S6 **Clear View Cover**

A see-through case? That's right. The Clear View is a flip cover with a translucent, semi-metallic finish to the front that lets you see your notifications without opening it up. £30

> Samsung Edge Wireless Charging Station

One of the hidden extras of the S6 is Qi and PMA wireless charging. This low-cost wireless charging dock makes plugging in a thing of the past. £40

Withings Activité Pop Not all smartwatches look like phones trying to fit

onto a strap. The Activité Pop tracks your steps and monitors your sleep, syncing the results with a nifty Android app. £120



WHAT'S NEXT?



One thing none of these phones really aced is battery life. Sure, some of them

charge up super-quick, but you can drain any of them in a day. There are a handful of amazing battery techs being worked on right now, from ones that charge in seconds to those that last for weeks. We can't wait.

But what about the near future? HTC has already announced an even higherend version of the One M9, the M9+. It has a QHD screen, although it's only heading to China at the moment.

There are also a few side contenders you might want to consider waiting for. The Galaxy Note 5 is likely to show up later this year and OnePlus is already talking up its Two phone... although you may have to beg for an invite to buy one if the OnePlus One is anything to go by

is anything to go by.
So should you wait? Only
if you want a much bigger
phone, or a significantly
cheaper one.



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		Screen	Processor	Cameras	Storage	Battery	Dimensions
1st	Samsung Galaxy S6 The S6 finally aces what Samsung has always struggled with: design. It's the new benchmark for flagship phones. from £530 / samsung.com	5.2in 2560x1440 OLED (577ppi)	Exynos 7420 octo-core 2.1GHz	16MP rear, 5MP front	32GB, 64GB, 128GB (no microSD)	2550mAh	143x71x 6.8 mm, 138g
2nd	LG G4 Big screen, impressive camera and optional leather back. It's not a revelation, but it's great. £500 / lg.com	5.5in 2560x1440 LCD (538ppi)	Snapdragon 808 hexa- core 1.8GHz	16MP rear, 8MP front	32GB (plus microSD)	3000mAh	149x76x 9.8mm, 155g
3rd	HTC One M9 Not every change is golden but the gorgeous, effortless design still makes it a winner. from £525 / htc.com	5.0in 1920x1080 LCD (538ppi)	Snapdragon 808 hexa- core 1.8GHz	20MP rear, 4MP front	32GB (plus microSD)	2840mAh	145x70x 9.6mm, 157g
4th	Huawei P8 Huawei has earned its place in the big league with the P8. It's not perfect, but at this price it's well worth a look. £400 / huaweidevice.co.uk	5.2in 1920x1080 LCD (424ppi)	Kirin 930 or 935 octo- core 3GHz	13MP rear, 8MP front	16GB, 64GB (plus microSD)	2680mAh	145x72x 6.4mm, 144g

The Lenovo YOGA 314. Use it any way you like it.



Lenovo YOGA 314" 2-in-1 laptop

Work easy. Play hard. H Windows

If you want a computer that's flexible enough to fit in with your lifestyle, then the Lenovo YOGA 3 14 could be right for you. With a stunning thin and light chassis, a 10 point multi-touch full HD screen, backlit keyboard and the new 5th generation Intel® Core $^{\text{\tiny TM}}$ i7-5500U processor, this 2 in 1 laptop provides the ultimate on the go experience. Complete with 8GB of RAM and 256GB of SSD storage for fast multitasking and boot up time.



STUFF PICKS **∅**□■

COOKING WITH FIRE

The Stuff team pulls on its mitts, cracks open a beverage and fires up its five favourite gadgets for al fresco feasting



Lotus Grill

Esat Dedezade, staff writer £140 / lotusgrilluk.com



If it's dry, it's barbecue time, no matter the season. The trouble is, it's no fun smelling like a human cigar all day, so the Lotus Grill holds charcoal in a central container to

reduce smoke, while the radiating heat cooks the food. This prevents dripping fat from charring the meat, and a built-in fan is handy for quickly reaching the right temperature. The downside is that it feels like you're using a hob. The lack of flames just feels a bit... wrong.

Stuff says ★★★☆

USE IT WITH...

Lotus Grill Glasshood £60 / lotusgrilluk.com

This handy lid made from stainless steel and security glass converts the grill into a slow-baking/roasting oven, letting you use the Lotus Grill's fan to adjust the temperature as you see fit.







Jetboil Joule



JE

THE REAL PROPERTY.

Ross Presly, deputy art editor £130 / cotswoldoutdoor.com

For me, outdoor cooking tends to happen more while I'm camping — and this solves my biggest morning gripe, the time it takes to make a brew. Normally you can be waiting up to 10 minutes for your water to boil; this thing boiled five cups' worth in under three minutes. It uses a series of metal fins and an insulating cosy so as to not waste any energy from the gas canister. The stand fits inside the pan for easy transportation, there's an electric ignition and it holds 2.5 litres of water. Tea for everybody!

The lid has an in-built strainer, perfect for draining the Jersey Royals for the awesome potato salad that I made for team Stuff





Lifeventure Titanium Mug £20/

lifeventure.co.uk

You'll need a pretty good-looking mug to drink all that tea out of, and this one is made of titanium so it's light and durable. It even has collapsible handles.



Trident_redefined.



C60 TRIDENT PRO 600 – Swiss made dive watch with automatic mechanical movement, unidirectional rotating ceramic (ZrO₂) bezel and water resistance to 60 bar/600m. Available in 38mm and 42mm case sizes, five dial/bezel combinations and four strap styles.

SWISS MOVEMENT



ENGLISH HEART

EXCLUSIVELY AVAILABLE AT christopherward.co.uk

Little rad riding HUD

Is the Recon Jet the next generation of Google Glass, or just some face-clutter?

US\$700 / reconinstruments.com

- Designed for cyclists and runners, the Jet puts a tiny display by your right eye. The Jet's 'Engine' juts out in front of the right lens and sweeps all the way back to just in front of the ear, with a matching battery pod on the left. The 85g weight might not sound much, but it's double the weight of most sports sunglasses; you'll feel the difference.
- The Jet has its own GPS, but can also connect to your phone for better accuracy. You can pair it with a variety of sensors, from heart-rate straps to power meters and cadence sensors.
- Control is via an IR sensor that responds to swipes, or you can use a rocker switch. It takes a bit of getting used to and is more distracting than using a handlebar computer, and there's no voice control. Third-party apps can be installed, but there aren't many available yet.
- With your speed, distance and heart rate at eye level, it's easy to see your progress. This is great for running, if you don't mind looking a bit funny, but for cycling on roads in the UK (ie, on the left side of the road), we'd go so far as to say it's potentially dangerous. The display blocks the exact place you need clear to see traffic when looking back over your right shoulder and unlike Google Glass, you can't see through it.

Tech specs

CPU 1GHz dual-core ARM Cortex-A9 Memory 1GB SDRAM Storage 8GB flash Display 16:9 428×240 (WQVGA) Battery Up to 4 hrs per battery (removable) Camera 720p video, 1.2MP stills





■ Points of view

The Jet's built-in POV camera snaps unimpressive 1.2MP stills and 15-second, 720p videos. This is fairly easy to do with two clicks, but a hands-free method would be quicker and safer.



■ Lost in face

You can load up to 10,000km² of maps onto the Jet, but they're difficult to make out properly and there's no turn-by-turn navigation, meaning they're of little practical use.

STUFF SAYS It's an interesting idea, but the Jet just isn't ready for take-off yet $\star\star$

Personal displays for sport haven't yet come of age



Having a HUD on your sports glasses is a great idea but, as with any idea, its success is all in the execution. You never get the sense that the Jet's display is 'augmenting' what you see, so much as getting in the way. I'm convinced there are applications for the format in sport, but at the moment the Jet feels like a first-stage proof of concept that detracts from the sporting experience rather than enhancing it.

Surface attention

Microsoft's genre-bending hybrid gets the full-fat Windows experience on a zero-calorie budget

£420 / microsoft.com

- Like previous Surface hybrids, the keyboard can be added in a flash using a magnetic fastener. It's the kickstand on the back that gets you the laptop-style touches, with three angles from pretty upright to really quite laid-back.
- The screen shows no sign that this is a more affordable Surface. It's 10.8in across and gets you 1920x1280 resolution: a bit more
- The Intel Atom CPU is built for efficiency, not speed, but Windows 8.1 and basic apps still tick along nicely. It'll even handle Skyrim... a hobbyist video editor: with 2GB
- the Surface 3 is incredibly syelte. It's 8.7mm thick and weighs 622g, Android tablet of a couple of years ago. With keyboard attached you
- The Surface 3 can take a run

Techspecs

OS Windows 8.1 **Screen** 10.8in 1920x1280 LCD CPU Intel Atom 1.6GHz guad-core **GPU** Intel HD 5300 **RAM** 2/4GB **Storage** 64/128GB Connectivity 802.11ac, BT 4.0, USB 3.0, microSD, Mini DisplayPort Cameras 8MP, 3.5MP Dimensions 267x187x8.7mm, 622g



- to an extent. Stay away if you're or 4GB RAM the Surface 3 doesn't really have the chops for it. For a full Windows 8.1 computer,
- making it similar in size to an can rest it on your knees, though it does feel a bit odd.
- at any Windows software, but it's not quite as convincing a laptop replacement as the Surface Pro 3. The Intel Atom CPU is impressive all the same, though, and for some it'll have all the power required.

Just your type

The Type Cover keyboard is an integral part of the Surface experience. Its keys feel just like those of a laptop, and there's even a backlight to help you tap away in the dark.



■ Bolt-on bytes

You can't upgrade the Surface 3 like you can a desktop PC, but there is a sneaky microSD slot under the kickstand. There's also a 4G option if you want always-on connectivity.

STUFF SAYS Smart, ultra-portable and full Windows 8.1 – no compromise in sight ★★★★☆

lt's a grown-up computer... are the kev



Microsoft finally nailed the hybrid formula with the Surface Pro 3, and now it's translated it to this more affordable version. The training wheels are off and this is very much a proper computer, just shoehorned into an unusual frame. But don't make the mistake of going cheap and getting it without the keyboard: it may be an accessory, but it's the one that's essential for the Surface's versatility.



The best soundbar?

The experts think so...



Home Cinema Choice 'Best Buy' July 2014



Trusted Reviews 'Recommended' October 2014



What Hi-Fi? Awards 2014. 'Product of the Year'



AV Forums 'Highly Recommended' July 2014



Tech Radar '1st in Tech Radars Top 10 soundbars', March 2015



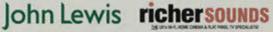
Media 4 The real hi-fi soundbar Sonic wizardry for music and movies

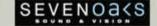
With its 100w amplifier and built-in subwoofer, the Media 4 plays music, TV sound and movies with astonishing quality - no extra boxes required! Simply plug and play - plus wirelessly connect smartphones, tablets and laptops using aptX Bluetooth.

Wall mounts with built-in bracket or shelf-mount with supplied anti-vibration feet.

Available from







and all good audio retailers

www.Qacoustics.co.uk

Going like the trackers

Short of replacing them with huge, shiny pistons, the best way to upgrade your legs is with one of these fitness-tracking wearables



Fitbit Surge £200 / fitbit.com

What is it?

The Surge is Fitbit's top tracker, offering a lot more than the movement–tracking of its smaller, cheaper siblings. Inside is an optical heart–rate monitor and GPS, behind a 20x24mm monochrome LCD screen. It uses a combination of touchscreen and physical buttons on its slightly odd, wedge–shaped body.

Is it any good?

With plenty of fitness bands in its locker already, Fitbit knows how to make a comfortable strap. The Surge's wide, soft-touch rubber strap runs seamlessly into its curved casing and is extremely comfortable. Sadly, the body's unusual wedge shape, while good for getting the display to a readable angle,

makes the whole watch stick out a long way from the wrist, getting caught on clothing and just looking a bit odd.

The optical heart-rate monitor is lightning quick to pick up a pulse, and does so without needing a particularly tight strap. Navigating the functions and starting activities is simple and the screen design is clear

and concise. While rated for 50m waterproofing, it's not recommended for swimming (and won't track it). The Surge's notifications are also limited to just texts and calls.

Tech

Tracking GPS, heart rate, steps, sleep **Alerts** Calls, SMS, music **Battery** Up to 7 days (claimed)

Words Jools Whitehorn



Sony SmartBand Talk £130 / sony.co.uk

What is it?

In the middle of Sony's smartband range, the Talk is the only one here with an E Ink display or hands-free calling. For a smartband, its 1.4in screen is large: great for notifications. Activity tracking is by way of accelerometers and an altimeter - no GPS or HR here – making this little more than a pedometer.

Is it any good?

The band it self is small, light and comfortable, but wider than screenless fitness bands. The monochrome display is great in sunlight, but there's no backlight for night use and there's significant ghosting, with traces of the previous screen's contents left behind. The hands-free calling feature is useful

while driving, and quality is adequate, if a little echoev.

The Lifelog companion app gathers a frightening amount of data about your daily habits: steps and calories; time on Facebook; photos taken; and even gaming sessions. The presentation is impressive. but more detailed sports tracking and analysis would be helpful.

Accuracy is poor when compared with the fairly consistent Google Fit, measuring 2000-3000 steps more in a day. It was also extremely optimistic about how much sleep we actually got.

Tracking Steps, sleep Alerts Calls, SMS, music **Battery** Up to 3 days (claimed)

STUFF SAYS A likeable smartwatch disguised as an average activity tracker ★★★☆☆



Basis Peak £170 / mybasis.com

What is it?

The Peak doesn't work like most fitness watches: it captures a continuous stream of movement and physiological data. The most watch-looking of the bunch, the Peak could be passed off as a rugged digital watch to the uninitiated.

Is it any good?

The Peak may not have GPS, but its party trick is that it automatically identifies your activity. It picks up running sessions very effectively, although as you don't manually start and stop these sessions it's prone to cutting them into smaller chunks when you pause to cross a road or stop to tie a shoelace. This makes it difficult to compare like-for-like

sessions on a regular route, for example.

Most impressive is the four-day battery life, even with its always-on optical heart-rate monitoring. However, the HR monitor doesn't find a pulse as well as the Fitbit Surge, requiring a much tighter fit that makes it a real relief to take it off regularly.

Notifications for calls and texts are displayed, and can be swiped away or ignored until they disappear a few minutes later, but the Peak is still waiting for third-party apps for social media, emails and the like.

Tracking GPS, heart rate, steps, sleep Alerts Calls, SMS, music **Battery** Up to 4 days (claimed)

STUFF SAYS Innovative tracking doesn't make up for the lack of comfort ★★★☆☆

Garmin Vivoactive £200 / garmin.com

What is it?

Garmin's square, slim watch tries to bridge the gap between full-on fitness watch and everyday smartwatch. In this impressively thin body it fits many of the advanced features of its dedicated sports watches, including GPS, swim tracking and ANT+ sensor compatibility, as well as supporting all manner of notifications and remote music control.

Is it any good?

Calling on Garmin's sporting pedigree, the Vivoactive is essentially a slimmed-down version of its full-on GPS watches. Tracking running, cycling and swimming, it's always on hand for an impromptu fitness session, and has the slim form to make it

acceptable to wear all day. The dated square design is a bit of a shame, but the shape allows more room for notifications text.

The display itself is a little dull, and its 205x148 resolution isn't spectacularly sharp. But like all Garmin's watch offerings, it hooks into the Garmin Connect app and online hub, which saves and displays data in enough detail for the sportiest of data fans.

The claimed battery life of three weeks or 10 hours in GPS mode holds up well, with a few runs with GPS taking it to just under a week between charges.

Tech

Tracking GPS, heart rate, steps, sleep **Alerts** Email, calls, SMS, music **Battery** Up to 3 weeks (claimed)



STUFF SAYS A GPS watch you could wear all day, if you like its style ★★★★☆

Microsoft Band £170 / microsoft.com

What is it?

Designed to be used with its new Health service, Microsoft's first foray into wearables packs a wealth of impressive specs. It features a colour screen, optical heart-rate sensor, GPS, skin temperature sensor and even a UV sensor. Bizarrely, it's designed to be worn with its 320x106 screen on the inside of the wrist.

Is it any good?

The feel of a fitness band is a user's first experience of the product, and the Band doesn't feel great. Its difficult shape – the long and straight display, the battery bumps on the inside of the strap and the optical HR sensor – means it contacts your wrist at three or four spots rather

than wrapping the whole way around it.

The HR sensor picks up your pulse without fuss, however you wear it, and it'll even track your reps in the gym. Microsoft has also made sure to pair its Band with some decent apps, including MyFitnessPal, Strava and RunKeeper. Notifications are good on its bright colour screen, but deleting emails directly from the watch isn't possible.

It's not waterproof and you can't use it to control your music. With mixed use and a short run you'll likely need to charge it every one or two days.

Tech

Tracking GPS, heart rate, steps, sleep **Alerts** Email, calls, SMS, music **Battery** Up to 48hrs (claimed)



STUFF SAYS Designed with the spec sheet rather than the wearer in mind ★★★☆☆

Anew Air apparent?

Both these laptops strike the perfect balance between power and portability for well under £1000. But is there finally a better option than the reigning MacBook Air?

Apple MacBook Air 13in

What's the story?

The laptop that practically invented the Ultrabook format has been updated for a seventh time. It's outwardly the same slim, light slice of tech, but Intel's latest Broadwell-generation Intel Core i5 CPUs let it rev that bit harder.

Is it any good?Apple knows not to mess with a winning formula, and the Air 13in is still almost unbeatable. Just check out the battery life: up to 12 hours. Very few Windows laptops get anywhere close. What's more, with a Core i5 CPU playing conductor, OS X sings beautifully. (If you're planning to edit videos, upgrade the RAM to 8GB.)

There is, however, a sense that Apple is being a bit too slow to really change the Air, and the most obvious sign of this is the screen. When most phones are 1080p, the Air's panel seems quaintly old-fashioned. It looks plain bad when not viewed dead-on, or Apple's other laptops.

And while it's one thing not to mess with a formula, Apple's fancy new 12in MacBook makes the Air's design look a little tired.

Price from £850 / apple.com 1440x900 CPU 1.6GHz Intel Core i5 GPU Intel HD 6000 RAM 4/8GB Storage 128/256GB SSD Connectivity 802.11ac, USB 3.0 (x2), Thunderbolt 2.0, SD Dimensions 325x227x17mm, 1.35kg

Stuff says ★★★★☆

Still a great laptop with awesome battery life, but the screen and design are ageing

Asus Zenbook UX305

Whats the story?

Asus's Zenbook Ultrabooks normally cost a fair bit, but this one is pretty affordable while still giving you the look and feel of a far pricier laptop. Not bad, right? It also pips the more expensive MacBook Air in a few other important areas...

Is it any good? The Zenbook is noticeably thinner and lighter than the Apple, and unusually for an Asus laptop, it also looks great.

It can't touch the MacBook on battery life, but with around nine hours of stamina when doing simple stuff, it still has decent staying power. That's largely down to using one of Intel's new Core M CPUs. These aren't as powerful as the Air's Core i5, but there's enough grunt to handle light duties and even some gaming. It has 8GB RAM as standard, and in use we found it to be generally smooth 24/7.

Its biggest win is the screen. With a great 1080p IPS display it easily outclasses the Air here, and the matt finish means you can take it out in the sun without being bombarded by reflections. And to seal the deal, it's £200 cheaper than the Apple.

Price £650 / asus.com

OS Windows 8.1 Screen 13.3in Auto IPS, 1920x1080 CPU Intel Core M 5Y10 GPU Intel HD 5300 RAM 4/8GB Storage 128/256GB SSD Connectivity 802.11ac, USB 3.0 (x3), micro HDMI, SD Dimensions 324x226x12.3mm, 1.2kg

A brilliant bargain, and our new favourite ultraportable laptop

APPLE VS MICROSOFT: THE 2015 **EDITION**

Work perks

One of the big benefits of OS X is that it gets you Office-style apps such as Pages for free. Numbers and Keynote round off a pretty good suite for work stuff. With Windows, you need to get your hands on an Office 365 subscription for the Microsoft equivalent. The UX305 doesn't come with one, and it's £60 a year.

• Ready to play
Windows is a much better bet for games than OS X. PC makers are struggling, but the platform still gets many more new games releases than Macs; see the Steam catalogue for proof. That doesn't make the UX305 a high-end games machine, though - it's more of a casual gamer.



THE WORLD'S MOST ADVANCED TV. EVER.

Staggering colour and contrast, supreme detail, great sound... your eyes and ears deserve it

emember the first time you saw Full HD? The difference in quality? The immersiveness? We're back at that point. This is the **LG 55EG960V**. It's OLED 4K – and it's the TV you've been waiting for.

Each pixel emits its own light, so one can be white while its neighbour is black – which means staggering contrast and amazingly accurate yet vivid colours. Perfect black truly creates perfect colour. But this TV also has more pixels – four times as many – as a Full HD TV. It makes for astonishing detail, boosted

by OLED's superb motion handing and true-to-life colour. Get this and you'll want to shout about it; to get people round for movies, sport and games.

And it's not just the picture. There's also the harman / kardon™ speakers that pack punch not usually associated with ultra-thin screens. And the stand – which makes the TV appear to float.

The set comes with LG's acclaimed webOS smart platform too, and with it, outstanding entertainment from the likes of Netflix, NOW TV, Wuaki.TV and Imazon Instant.

LG 55EG960V

Display 65in OLED

Resolution 4K (3840

x 2160 pixels

Audio 4.0-channel

speakers by harman / kardon™











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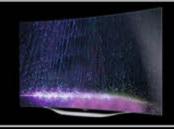
LATER IN THE YEAR

The curve... now available flat

But LG isn't finished with its 2015 OLED offering. There will be four new models later in the year, including the stunning, first-of-its-kind, flat 65EF950V (pictured) also available in 55 inch. There's also the 65 inch EF980V (flat) and the 55EG920V (curved) and the amazing flexible 77EG990V.



ALSO AVAILABLE...



LG 55EC930V

Not ready for 4K yet? No problem. Full HD OLED looks every bit as stunning. The LG 55EC930V has the same self-lighting four-colour pixels as its 4K brethren, the same amazing contrast and the same silky-smooth motion-handling. Its curve immerses you and its webOS interface puts a world's worth of content at your fingertips.

Display 55in OLED Resolution Full HD (1920 x 1080 pixels) Audio 2.0-channel



veryone's favourite white-haired slaver returns, and in this open-world third instalment it feels as though Geralt has finally got the game he deserves: the one that developer CD Projekt Red has been aiming for all along.

You'll feel this in the freedom of the massive open-world setting, but it's also evident in every other aspect that's been expanded, evolved and tweaked.

As ever, the titular monsterhunting witcher is the star. He's still as dry as a skeleton's wishbone, but this time there's more of a twinkle to his dialogue. It's tracking down his surrogate daughter Ciri that forms the crux of the main quest. But she's also being tracked by the Wild Hunt a bunch of nasty skeletal chaps with a penchant for murder and turning everything to ice – and the whole story plays out with a monster-infested, war-ravaged country as its backdrop.

Hunting your prey is more involved and interesting than before, and frequently involves using your Witcher senses to find clues and track footprints or smells. The enemies are often truly revolting – wraiths with lolling tongues that would make Gene Simmons blush, and demon babies wrapped in their own umbilical cords – but once you know what you're up against you can prepare the relevant potions, bombs and

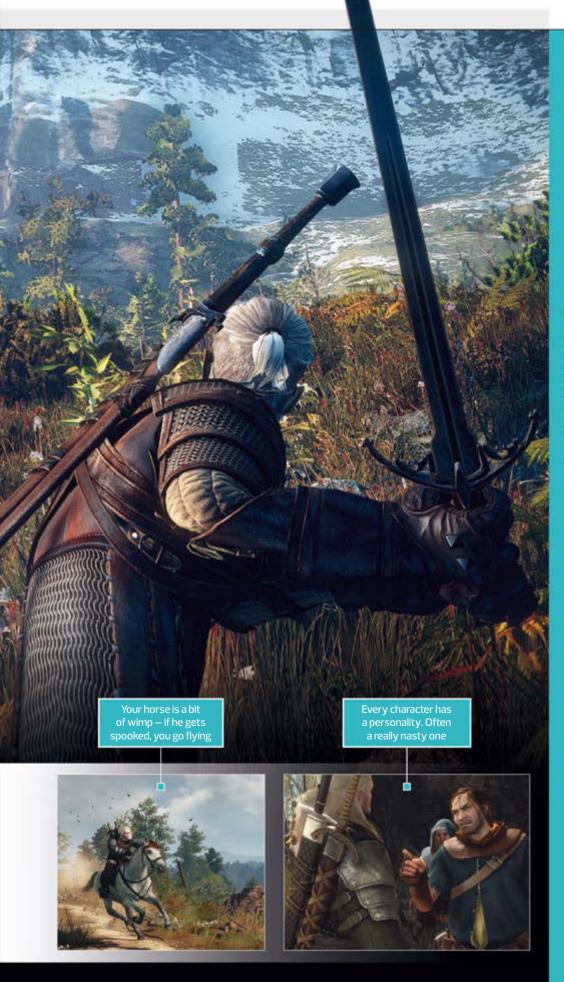
However, combat is tough even when fully prepared, and there's something fairly Bloodborne-like

about the way you have to parry, pirouette and roll to create an opening to stick one of your two swords into. Regular saves mean failure is far less punishing than it is with Bloodborne, but on anything but the easiest difficulty setting you need to be prepared for fairly frequent death.

There are some flaws, mostly in the occasionally irritating AI, but The Witcher 3 is still one of the most beautiful, involving, varied and fun games I've ever played.

Tom Parsons

STUFF SAYS Bigger than *Skyrim* and with more character, this is the new RPG benchmark $\star\star\star\star\star\star$





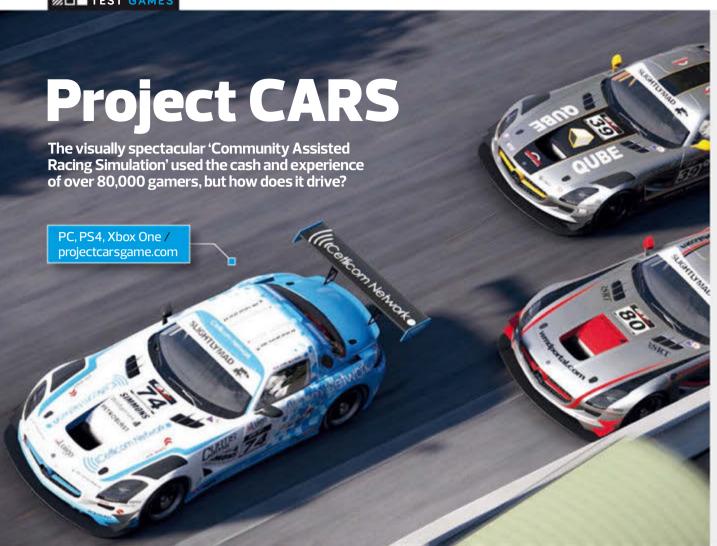
A truly massive open world

Geralt may be on the cover, but the real star of *The Witcher 3* is the map. The Northern Realms where you'll spend most of your time, equate to a region that's vastly larger than all of *Skyrim*, and the Skellige Isles are ginormous too.

There's a lot of pleasure to be had in simply wandering these lands, such is the detail on offer. You enter settlements, some more welcoming than others, visit the inn to get the local news, maybe stumble into a brawl between the locals and the occupying army. If you want to play the vagrant, you can do just that.

But the world is also full of things to do — things with heft and relevance, rather than the irrelevant, endless collectibles of a game like Assassin's Creed. You take on contracts to slay beasts that are terrorising the community, find a missing loved one, or clear a house that's been overrun by ghosts. There's impressively little repetition to these side-quests — each has its own story and outcome. They're a pleasure, not a chore.

And the world is beautiful, even when it's ugly and savage, thanks to dynamic lighting and a weather system that can turn verdant fields into a sticky bog in minutes.



his is the racing sim that console gamers have been waiting for. The PC crowd has been kept fairly well supplied with hardcore simulations such as Assetto Corsa, but Xboxers have to make do with the fairly light Forza series and PlayStationers have to wait about a million years between Gran Turismo games. Not any more - Project CARS takes its racing very seriously.

But that doesn't mean it's inaccessible to more casual racers. There are assists and a racing line (complete with braking point indicators) that mean beginners ${\sf can\,be\,competitive-but\,you}$ do need to exercise a degree of concentration, consistency and patience that other games don't require. This is about stalking your prey, knocking a few tenths off their lead over a few laps and then sitting behind them for a few more corners, waiting for an opening.

It's super-competitive racing online with up to 16 players in each race, but set the AI skill level right (70% worked for me) and you can have real bumper-to-bumper

racing offline in career mode too. And this is a career mode without experience points, unlocks or a story. Instead you choose which formula to start in - from karting to Clio Cup to touring cars to Formula A, plus everything in between - then race a season and hope you've scored enough points to be invited to move up to the next level. Honestly, combined with the quality of the racing, it's all the motivation you need.

As you get better you can reduce or switch off the assists, chuck variable weather into the equation (wet races are a fantastic nightmare) and up your opponent Al for a tougher challenge.

There are issues – getting your controller settings just right can take ages, finding a good multiplayer lobby is a pain in the backside, and elements such as pitting are so complicated they appear a dark art – but fixes are in the works. Even if those fixes never came, you'd still put up with the flaws for Project CARS' otherwise brilliant, beautiful racing. **Tom Parsons**



Want to take the traditional route to the top? Start in a kart and work your way up

STUFF SAYS Gloriously gimmick-free, *Project CARS* lets the racing do the talking ★★★★☆







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Slow West_cinema

n the directorial debut of John Maclean (he of Beta Band fame), Kodi Smit-McPhee plays Jay, a wellto-do Scottish teenager with an accent that wanders almost as much as his feet. Slow West joins him at the start of a trek across America to find the girl he loves, who has been forced to flee with her father for reasons that are revealed through flashback. Jay is soon joined by bounty hunter Silas (Michael Fassbender) who, unbeknown to the boy, is also after the pair.

What follows is essentially a road movie from a time before roads, taking in some of the most breathtaking scenery New Zealand has to offer in its role as the American outback. But while almost every background could be an oil painting, this is an ugly world in which second-hand coats come with bullet holes and bloodstains.

On the way the unlikely duo's blossoming bond is tested by, among others, a sniper disguised as a priest and the fur-coatwearing, absinthe-drinking Payne (Ben Mendelsohn). At times Slow West has a fairytale feel to it, complete with thick forests and lone cottages that Payne's pack of snarling vigilantes threatens to blow down. These Coen-style quirks make Slow West memorable, and make up for its only halfexplored ideas around the treatment of Native Americans. Tom Wiggins

STUFF SAYS ★★★★☆



It's more patriotic than an overweight bald eagle driving a Mustang with a stars'n'stripes paint job but, some dubious and overly simplified politics aside, American Sniper is a gripping tale of the US military's deadliest marksman. All the same, it's difficult to shake the feeling that there's a more interesting story to be told. Tom Wiggins

STUFF SAYS ★★★★☆

Blackhat _Blu-ray, DVD, VOD

This stylish tale of hackers hacking hackers seems a tad simplistic at times but it dodges most cybercrime clichés. Chris Hemsworth is a binary-code Bourne, equally happy armed with a gun as a keyboard – and it's his trigger finger that becomes his key asset. Given the potentially dry subject matter, that's probably for the best. Tom Wiggins

STUFF SAYS ★★★☆☆



READ



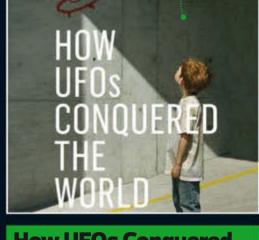
My Love Is Cool_Wolf Alice

When grunge ruled the world in the early '90s the four members of Wolf Alice weren't even born. Listening to their early EPs you'd never have guessed it, but if that wave of Seattle-tinged hype brings you to My Love Is Cool, you won't find the tribute record you might expect.

That's not to say those influences aren't clear: You're A Germ has the shout–along charm of textbook Hole, while

Giant Peach is Sleater– Kinney gone krautrock, but it's a record that's far poppier and more varied than that. There's an Ellis-Bextor Englishness to Ellie Rowsell's vocals, which go from breathy whisper to riot-grrrl scrawl. Just when you think you've got Wolf Alice sussed, they twist off in another direction. Tom Wiggins

STUFF SAYS ★★★★☆



How UFOs Conquered The World_David Clarke

Smartphone cameras haven't exactly sparked an explosion of convincing UFO videos. Could it be that flying saucers and their ilk are a 20th-century human syndrome that reflected the pop culture of their time?

That's the argument of this fascinating book by Dr Clarke, a childhood believer turned UFO journalist. Critical without belittling its many eyewitnesses, it revisits major UFO events to show how films like Close Encounters Of The Third Kind and the Cold War primed Western minds for the idea of being watched over by shy aliens.

It's a fine read — even for Mulder types who still want to believe. Mark Wilson

STUFF SAYS ★★★★★



A Dream Outside_Gengahr

This is quite nice. It's bright and crunchy melodic indie rock with some interesting dynamics, and quavery falsetto vocals that sound like a nervous pixie asking for a pay rise. At times it recalls MGMT, but with twinkly guitars instead of lush synths... and, aside from a couple of duffers near the end, much more imaginative songcraft. *Richard Purvis*

STUFF SAYS ★★★★☆



Get To Heaven_ Everything Everything

Everything Everything continue to impress with their own brand of electro-flecked indie rock by packing laptop beats, frantic drumming and the unmistakable falsetto of Jonathan Higgs. You'll find yourself mumbling along to Spring/Sun/Winter/Dread but be careful trying to sing along with To The Blade. Kyle Pittman

STUFF SAYS ★★★★☆



Leaving Orbit_Margaret Lazarus Dean

Dean is a NASA nerd, but in the most charming way. Her stories and enthusiasm are what give this ode to the end of the Space Shuttle programme its endearing personality. This is a history lesson with heart and wide-eyed wonder, and any space fan will appreciate its optimism for the future. Tom Parsons

STUFF SAYS ★★★★☆



Eyes Wide Open! 100 Years Of Leica Photography

_Hans-Michael Koetzle

Few brands are as iconic as Leica. This coffee-table book claims it invented fashion photography, the avant-garde, the world as we know it... Fortunately, it's also packed with great photos which say more than the words ever could. Marc McLaren

STUFF SAYS ★★★☆☆

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e love music, it loves us. Having the right kit is as important as choosing the right track. The MicroLab T7 is a multi-function, shockproof speaker that can fill a room with music from loads of sources. Line-in, USB, FM radio and Bluetooth all sit alongside the CD player, which means you'll never struggle to find something to play.

But the T7 is all about audio performance. Internal shockproof technology and high-quality Japanese components, plus the external power supply, minimise interference. Noise-cancelling tech means a clean feed, while Bluetooth streams take advantage of high-quality aptX tech for clean, interruption-free audio. Good looks, hassle-free and pure class. What more could you want in a speaker?









p108 BETA YOURSELF: **SOAPBOX CARS**

It's exactly like F1, but with gravity and a gentle slope instead of engines



p110 PLAYLIST: T-SHIRT SITES

Browse our favourite online stores to get teed up for summer



p112 SUPER GEEK: MOTORCYCLES

All you need to know to become a leather-clad lightning bolt





p117 5-MINUTE HACKS: IF NOTHING ELSE...

Beat your screen obsession, and other life fixes

SOAPBOX CARS

Shed projects don't get much more exciting than building a gravity racer. But where to start? Red Bull soapbox designer Philip Ryan maps out your road to glory



■ Have a digital brainstorm.

Sketchup (sketchup.com) is a free and very useful tool for visualising your soapbox design. For inspiration, check out the All American Soapbox Derby (aasbd.org) and Gravity Racing (gravityracing.org.uk).

■ Go aero. Even at relatively low speeds, aerodynamics are important. Make sure your design interacts as little as possible with airflow. If you don't interact with the air, it isn't going to know you're there. This will reduce drag and increase your speed.



■ Budget wisely. The costs of building a basic soapbox car can quickly add up. We saved with bicycle wheels and a go-kart steering wheel, but we spent £250 buying raw materials and getting the body panels cut out.

■ Start with the wheels.

The general consensus is that 20in wheels offer the best balance of speed and stability

for gravity racers. Also consider how you want it to look, and what you can afford.

- Wood or metal? Beginners should choose wood as their main material. The basic tools are in most people's garage, and sheet timber is pretty cheap. All-metal cars offer greater strength and longevity, but demand more specialist skills.
- Keep it real. eBay and Gumtree are useful sources for parts, but it's worth spending some time perusing secondhand bike shops and skips. We got the wheels for our prototype from a kid's bike that had been thrown out.







NEXT STEPS

- **Get onside.** We started with the side panels and built the chassis to suit. If you don't have access to a CNC machine, an electric jigsaw will do. Set it to a slow speed and go steady.
- Use bike brakes. Homemade pads that rub against your wheels might be cheaper, but buying bike brakes is easier.

■ Weigh up your course.

Flatter, straighter courses tend to favour heavier builds, while ones with corners and chicanes are better suited to lighter, more nimble designs.



FINISHING TOUCHES

■ Tool up. A circular saw is good for speed and a mitre saw accurately cuts across the grain. We also used an angle grinder, impact driver and orbital sander.

THE BUILD

- Avoid rope steering. It's unstable, so adopt a go-kart's 'pitman arm' steering. You'll find a strong axle, steering column, track rods and hubs on eBay.
- Customise the cockpit. Before bolting in your seat, get the driver to move it around until they're comfortable. Tape in some padding too - they'll thank you when landing a jump.
- Tweak the steering. If it's too twitchy, try shortening the length between your steering column and the track rods. Test and re-test until you're happy.
- Plan your paint job. Soak up inspiration from magazines such as Hot Rod (hotrod.com) or Red Bull's soapbox gallery (redbullsoapboxrace.com).
- Prepare to fail. Your driver should wear a motorbike helmet and gloves. You could also build a rollcage into your design. This should include lots of triangles to boost its strength.

DRIVING TIPS

- Brake wisely. Going fast is easy; not losing speed is a real skill. Practise the racing line, going slower into corners and only braking when necessary.
- Don't over-steer. Lots of corrections will slow you down. If you're heading for the barrier, try to make one adjustment and don't overcorrect.
- Practise jumps. If your race includes a jump, make sure your car won't collapse in on itself. If it's strong enough, get some big air for the cameras - you only get one chance.



GUY MARTIN: GRAVITY RACER

"If you're not crashing, you're not trying hard enough" is speed-hound Guy's motto as he teams up with Sheffield Hallam University to have a crack at the world gravity racing speed record of 84mph.

It's a four-month journey through street luges, a crash course in mechanical engineering and many bales of hay.



ENGINEERING SPORT

This blog from Sheffield Hallam University's Centre for Sports Engineering contains detailed breakdowns of how its engineers designed Guy Martin's gravity racer for the world-record attempt (see above). And it's worth sticking around for enlightening posts on the aerodynamic tech behind sports like speed skating, skiing and cycling.



RED BULL SOAPBOX RACE

It's too late to enter your own soapbox into this international race at London's Alexandra Palace on 12 July, but that doesn't mean you can't buy a ticket (£9)and soak up some inspiration for your next soapbox masterpiece. Previous designs have included a burrito-shaped racer, a giant baby carriage and a massive corn on the cob.



T-SHIRT SITES

Why submit to the nightmare of going shopping in the physical world when all the smartest, most original T-shirts are to be found in digispace?



Artokingo

Featuring some of the best artistdesigned T-shirts on the net, Artokingo differs from crowd-powered stores like Threadless by only listing its favourite designs. These tend to be animal-themed, such as the lovely 'Fish in Geometrics' design by Florent Bodart to your right.

artokingo.co.uk

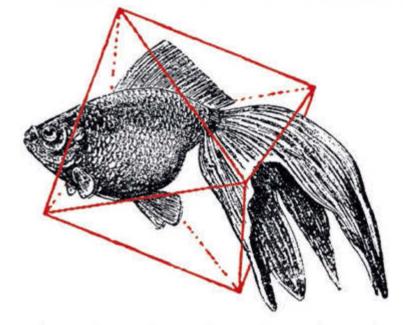




Photo.Clothing

We expect our photos to be printed all the way to the edge, so why not our T-shirts too? This place delivers striking photographic prints that cover entire shirts, sleeves included. Got to be better than a 'vintage' logo advertising a Californian crab shack that doesn't even exist, hasn't it?

photo.clothing



North East

For a touch of modernist Japanese minimalism, North East collaborates with international designers to offer bold prints with a geometric edge. All on plain white or plain black fabric, they're perfect for making a statement without actually having to say anything. northeast.jp



Threadless

A long-standing option for smart T-shirts, Threadless takes submissions from illustrators across the world and prints the ones that get the most upvotes. Because it's in the US you'll have to pay import duty, so it's worth buying in bulk or seeing if the shirt you want is on the UK-based tizarre.com

threadless.com



Worn Free

For maximum rock'n'roll cred. these licensed shirts pay homage to well-loved bands and musicians from Miles Davis to Debbie Harry. There are also designs worn by rock idols, so you can mimic their style. Of course, whether you do that sincerely or ironically is entirely up to you.

wornfree.co.uk



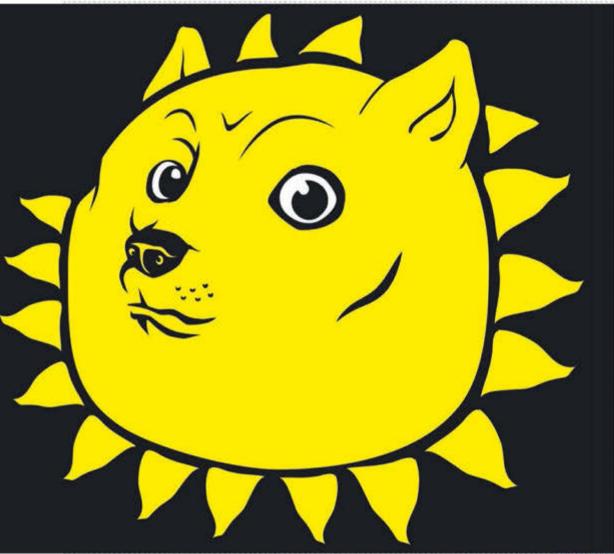
Insert Coin

If you like to be identifiable as a game geek, but only to other game geeks, head to this arcade of gaming-related clothing. From Assassin's Creed to Metal Gear Solid and beyond, it offers T-shirts and other ephemera that reference classic games without shouting about it.

insertcoinclothing.com



6dollarshirts As you might expect, this site offers six-dollar T<u>-shirts</u> (though you'll pay a bit extra once delivery and import duty are added). It's home to a cornucopia of different T-shirt genres including one-line gags, film references and internet memes. Much good looks. So trend. Do want. llarshirts.com





Dumptackle

Rugby fan? It could be worth popping here to get yourself some new threads in time for the World Cup in September. With loads of rugby-referencing designs ranging from the casual nod to hardcore fandom. there should be something to fit your level of zeal as well as your beer gut. dumptackle.com



T-Lab

Not the Tetley's R&D centre, but the online home of motoringrelated threads. Some of the most subtle offerings are the best – the one pictured refers to the high-speed bend at the end of the back straight at Suzuka. If you've got a favourite track, event or car, come here and get it on your chest. t-lab.eu



Last Exit To Nowhere

It's always better if you can lead your audience to the point without spelling it out. Each of Last Exit To Nowhere's offerings features a beautifully obscure reference to a classic film that will only be appreciated by people who don't talk until the credits are rolling.

lastexittonowhere.com

H RS CATÉGORIE

Whitstable T-Shirt Company

While a close-fitting outfit with familiar logos will quickly alert people to a 'serious' cyclist on the road, suitable off-bike apparel can be harder to come by. This comfy casualwear brand helps rouleurs show their colours with subtle pride.

whitstabletshirt company.co.uk

HOW TO... BE A T-SHIRT DESIGNER



SPREADSHIR"

spreadshirt.co.uk
Upload your own designs
to this T-shirt store and
it'll put them on its virtual
racks for other people to
peruse and buy. Here's
how to do it:

- Choose your design.
 Already got one ready to go? Just pick your T-shirt style and upload the image to Spreadshirt's Create' section. If you're more of a wordsmith, try a less involved design using its text box.
- If you're going the graphical route, bold designs with a limited colour palette are a good choice, so crack out your best software Adobe Illustrator (from £8/month, creative.adobe.com) is ideal and get to it.
- Upload your design, set your price and start promoting your new range of apparel. But be warned: if you can't persuade any of your friends to buy it by filling their Facebook news feeds with links to your shop, T-shirt design may not be your new career. Good luck!







Jon Urry explains why, in defiance of all practicality (and basic maths), two wheels are still twice as good as four

t might not be a scientifically credible theory, but there surely is a motorcycling gene. If you see a bike and consider the negatives (lack of boot space, having to faff about with a helmet...), then you'd best stick to the monotony of a car and crank up Radio 2. But if you see a bike and it stirs an emotion. makes you smile or even sends a strange tingle to your nether regions, then now is a great time to take to two wheels.

I started kicking around on bikes when I was too young to be on the road, charging around fields on a Honda C90 scooter (the best-selling motorcycle in the world) that I bought as an MOT failure from an old lady in the village. I often look on eBay as I'd love another C90 in my garage, but such is the power of nostalgia, prices have rocketed... which makes me wish I hadn't destroyed mine in a fledgling Evel Knievel incident.

I'll admit it, during those early years I fell off quite a lot and I've got the scars to show for it. But that was all part of the learning experience, and if you can't take a few bumps and bruises then

bikes might not be for you. Stick with it, though, and you'll find that modern models are light years ahead of what your dad used to ride about on.

At the moment, two different strains of motorcycle design are emerging. Bikes are going through an electronic revolution that is pushing performance boundaries, and a styling transformation that's bringing them back to the vintage years. It's a wonderful yin-and-yang situation that is seeing 200hp motorcycles with MotoGP-spec electronic systems lining up in

showrooms alongside bikes with air-cooled engines and 1970s influences.

These electronics are providing a safety net that's allowing sporty riders to explore performance limits like never before, while the retro bikes are bringing biking back to the basic enjoyment of feeling the wind on your face.

Bikes are cool again, and even Dr Who has been seen hurtling down the Shard on a Triumph Scrambler. If two-wheelers are more tempting than a Tardis. they must be pretty special...



SPORTSBIKE

Think race bikes with lights. If you want to go fast on the road or track these are built with only performance in mind. The Yamaha YZF-R1M opposite is a prime example, but see also the Kawasaki ZX-10R and Ducati 1299 Panigale.

ADVENTURE BIKE

Built to withstand them, adventure bikes are designed to be the Land Rovers of the two-wheeled world. The BMW R 1200 GS

SUPER NAKED

Offering sportsbike performance without the plastic panels, super nakeds are fast and comfortable. The maddest of the bunch is the Aprilia Tuono.

RETRO

Harking back to the '60s and '70s, retro bikes are all about style and combine old-school looks with modern reliability. The Triumph Bonneville is about as



KTM 125 DUKE

With the average age of motorcyclists gradually increasing, there was a real fear within the industry about the lack of interest from fresher-faced riders. The Duke changed all this. Designed to appeal directly to the X Games generation, it can be ridden by 17-year-olds on a provisional licence and proved that, if you build a high-quality two-wheeler that looks cool, younger riders will start saddling up. Since its launch in 2013, the 125 Duke has been Europe's best-selling two-wheeler. With ABS and a lightweight frame, it's a brilliant entry to motorcycling.

£4000 / ktm.com



DUCATI SCRAMBLER ICON

Hipster culture has found its way into motorcycling, and manufacturers are building bikes to appeal to a new breed of café racer fans. The Ducati Scrambler is designed to mimic the old-fashioned look of a 1970s bike, but the resemblance is purely cosmetic: its air-cooled engine is a modern unit and the handling is bang up to date. If you want old-school cool, you are currently spoilt for choice with Royal Enfield, Moto Guzzi, Triumph and Kawasaki all making lightweight, great-looking, rider-friendly options. This is the pick of the bunch.

£6995 / scramblerducati.com



SPIRED.



MotoGP is the F1 of motorcycling, where you'll find the world's best riders. Nine-times champion Valentino favourite, reigning champion Marc Marquez the latest riding sensation. The action takes place on 28-30 August.

silverstone.co.uk



Circular, the famous bike scene for over half a century and events most nights a must-go location

for any petrolhead. ace-cafe-london.com



ON ANY SUNDAY

motorcycling films ever made, this Steve McQueen-backed documentary follows and contrasts the lives of different types of bikers, from motocross obsessives to desert racers. The original was filmed in 1971 but *On Any* Sunday: The Next Chapter has just been released and includes a mix of current MotoGP stars.



YAMAHA YZF-R1M

The tech and performance packed into a modern sportsbike is mindblowing. The R1M makes 200hp and weighs 200kg, which is only just shy of the power-to-weight ratio of an F1 car. Under the fairing, three gyroscopes feed data 125 times a second to an onboard computer; this calculates the bike's exact position in space and uses it to control an array of electronic systems that include traction control, wheelie control, ABS and semi-active suspension. All this gives mere mortals the ability to harness what is basically a MotoGP bike with indicators... and all for less than the cost of a family car.

£18500 / yamaha-motor.eu



onanysundayfilm.com



REAWESOMISE...

YOUR HOLIDAY LUGGAGE

The route to summer bliss is littered with dangerous potholes that can derail an unprepared adventurer's plans in moments. Justin Mahboubian Jones cherry-picks the latest and best tech solutions to yesterday's vacation woes









Dodge the rain

Packable Rain Tunic

We cling to the hope that our holidays will be a festival of sunshine, but the UK weather is rather prone to indecision. Make sure you avoid getting soggy with this emergency water-resistant jacket, which packs down neatly into a pocket in the back of its foil-backed reverse face. £200/

mastrum.com

bettersmelling sound

UrbanEars Humlan

Taking £300 noisecancellers on your beach holiday can only end in sandy tears. For more adventurous trips we suggest these budget stand-ins, which are capable of taking a battering in your luggage and have washable ear cushions so you can refresh them after your morning seaside jogs.

£40 / urbanears.com

Engage your super-vision

Nikon Aculon W108x21

Whether you're spotting wildebeest or looking for the beach bar, a pair of hawk eyes is handy. These rubber-coated binoculars are waterproof to one metre and provide 8x magnification with a wide-ish field of view, making them equally useful for watching sport. £65/

microglobe.co.uk

Carry a camera obscurer

Crumpler Private Surprise

It's generally not wise to advertise that you're carrying a new £500 DSLR full of irreplaceable digital memories. This discreet camera bag will keep your camera secretly stashed in its lower compartment, while simultaneously cradling your 10in tablet in the padded divider above.

€80 / crumpler.eu

Win the bag war

Rimowa Topas Multi Cabinwheel

The fight for overhead locker space takes no prisoners, so make sure your luggage is armourplated. Thanks to its sturdy aluminiummagnesium shell, this 45-litre case is the Rasputin of carry-ons. Its smooth-running wheels also move in all directions to give you a tranquil glide through the terminal. £630 / rimowa.com



Some excitingly techy suitcases have been spotted on the crowdfunding carousel recently. Bluesmart (€330, bluesmart.com) and Trunkster (\$325, trunkster.co) both promise built-in scales, GPS tracking and USB gadget-charging.

Bluesmart also includes a digital lock controlled by your smartphone, with Trunkster opting for a zipperless rolltop door that apparently offers enhanced ruggedness and security. Sadly, neither will be available in time for this year's holiday season, with Bluesmart shipping in December and Trunkster in the autumn.

Oh well, just think how sci-fi holiday '16 is going to be...



Pocket some jumpleads

Cobra JumPack

Whether you're nursing a sickly hire car or exploring the back country, it's hard to imagine a more useful pocket charger than the JumPack. With a 400A peak current, it packs enough power to jumpstart most cars several times. And it's also a 7500mAh battery for re-juicing your gadgets as well as an LED flashlight. £90 / cobra.com

Take your Wi-Fi with you

Satechi Smart **Travel Router**

Because hotel Wi-Fi is often about as powerful as a moth's handshake, this crafty power adapter also incorporates its own wireless router. Plug in the hotel Ethernet cable and you'll have a fast, private network for web browsing, Skype calls, and even (if you also take a Chromecast) a spot of foreign Netflix. £35 / satechi.net

Keep your charging cable alive

Le Cord

Yes, that is a hilarious amount to pay for a Lightning cable, even by Apple's standards, and yes, it does come with a pretentious name one colour is called 'broken ocean'). It does come with a textile sheath that's much tougher than your standard cable, though, and it goes nicely with your choice of swimwear. from €55 / lecord.se

10 Be secretly seaworthy

Animal Herman **Boardshorts**

Watersports opportunities can arise unexpectedly on holiday. Instead of carrying an emergency pair of swimshorts, wear these all-rounders instead. They look like 'walkshorts' for landlubbers but are actually quickdrying performance boardshorts made from stretch fabrics. £50 / animal.co.uk



ALWAYS ON CALL

facebook.com/joinstuff @@stuffTV google.com/+stufftv stuff@haymarket.com



MAIL OF THE MONTH

Hello! I've read the review of the Sony KDL-50W829B Hello! I've read the review on stuff.tv and it is obviously an amazing TV. But is there now, in 2015, a newer (maybe better) version of this model that I should buy? Or is sticking to the KDL-50W829B the way to go? Would love to hear from you. Ruben Voortman

A Hi Ruben. This year's tellies are only just coming through so we haven't found a replacement for the KDL-50W829B yet. There undoubtedly will be one, and I'm sure it will be improved in some areas, but it's likely that it will also be expensive. So you might want to grab one while it's still available and heavily discounted.

Speak your brains and you could win a 6-month SPOTIFY PREMIUM SUBSCRIPTION This letter wins six months of ad-free, high-quality audio streaming from Spotify, worth £10/month





NURSE, THE SCREENS!

Hi Stuff – some help needed! I work from home and have a laptop and separate screen in my office. I have always used another laptop to run iTunes and show photos from an external drive, but this machine has now died. I have been looking around for a solution for around £350 but understand a Chromebook won't work and a Mac is too expensive. I've started to look at mini PCs from HP with a display switch, but this would need a separate keyboard and mouse. Can I ask for any suggestions, please? Thank you in advance. Sean Healey

Hi Sean. Before we tackle the keyboard and mouse

issue, have you considered using a music streaming service to listen to your songs online? There are plenty of options available, and they're a great way to discover new music. If you upload your photos to Google Drive too, then you can access everything from your work laptop without actually storing anything on its hard drive. But if you're set on the mini PC route, then US\$10 will net you some handy software called Synergy, which lets you easily share your keyboard and mouse across different PCs on the same network.

HEAD IN THE CLOUD Hi Gadget Doctor, here's a nice and easy one for you. I want to sign up to a single cloud storage site instead of having everything dotted around on Dropbox and Google Drive. What's the largest, most reputable option?

Give Mega (mega.co.nz) a go, Gemma. Not only does it offer an incredibly generous 50GB of space for free, but it's also built with security in mind. Everything you upload is encrypted locally and on the server itself, and only you can access your files as you're the sole owner of the encryption key.

MAP MY RIDE Hi Stuff. I'm going off on a European driving holiday this summer and am trying to find a way to use my phone as a sat-nav without laying waste to my bank account! I'll be taking the ferry across to France and then driving all the way to Turkey. I just don't think Google Maps will support saving that huge area offline. Any ideas? Cameron Burrows

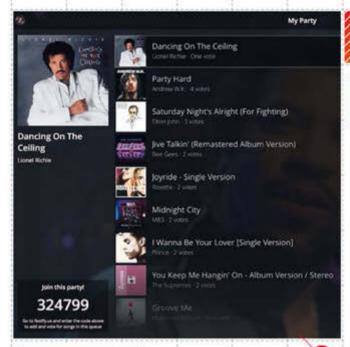
That's quite the A That's quite the undertaking, Cameron congratulations. You're right, there's no way Google Maps will let you cache such a large area for offline viewing. Luckily, Nokia (yes, really) is here to rescue you. Its solid Here Maps app (free on Windows Phone, iOS and Android) lets you download maps to use offline, with turn-by-turn voice guidance thrown in for good measure. Europe will make a hefty 9GB-ish dent in your storage space, so make sure you've got enough of it (or a microSD card if your phone supports it) before you head





5-MINUTE HACKS

IF NOTHING ELSE, AT LEAST...



Clearly you have the best musical taste of anyone at your party, but what if your guests don't agree? You let them vote for the next song...

Download Festify (£free, Windows and Mac) from festify.com. Enter your Spotify Premium username and click 'start new party'.

Now open the browser on your phone and type 'festify.us'. Enter your six-digit code and join the party. You can now add songs, and your guests can vote for them.

If it's all gone a bit Mumford and you want to reassert control of your party, go to settings, click 'show password' and enter this in the 'enter admin mode' section. You'll now be able to skip, delete and pause tracks.

4WITHYOUR

All you want to do is watch Netflix, but your PS4 controller has naturally run out of juice or gone AWOL. Here's how to use your telly remote instead:

You need to enable HDMI-CEC

on your TV. This has a different brand name depending on the manufacturer. For example, Samsung calls it Anynet+ and Philips calls it Easylink.

Once you've found out your HDMI-CEC equivalent, enable it in your TV's settings and in the PS4's ('Settings' > 'System' > 'Enable HDMI Device Link').

You'll now be able to use your

TV remote's directional pad to browse your Netflix queue. If you're watching telly, a press of your controller's 'PS' button will now also take you straight to your PS4.

You and your Android phone are best buddies, but sometimes you need to know when to unplug and maintain your other tech friendships. Let's introduce some Quality Time:

Download QualityTime (£free, Android). On its own this app will give you breakdowns of how long you're spending in each app, brutally exposing the extent of your Trivia Crack addiction.

Now go to ifttt.com/qualitytime

and activate the Quality Time channel. This will give you access to various recipes, such as logging excessive smartphone binges on a Google Spreadsheet or Calendar.

To treat hardcore addiction

set up a trigger, such as a notification when you exceed your daily time ration.



1

Daily Frequency 10	33 times
- Instagram	23 times
Chrome Chrome	12 times
1 Music	0 times
Contacts	& times

TUNE IN NEXT MONTH TO...

■ Build your own Nest thermostat ■ Survive (and maybe even enjoy) a wild camping trip ■ Cook up a truly smokin' barbecue





WIN ALPINE CAR TECH, VIRGIN STADIUM TOURS AND AN ADIDAS SMART BALL

The skills, the goals, the Turin tears in 1990... Paul Gascoigne's story is like something out of a film. And whaddaya know - now, exactly 25 years after the time England came so close to World Cup glory, it is something out of a film. That film is Gascoigne, a stunning feature that tells Paul's story in his own words, and it's out on 15 June (Blu-ray & DVD). This calls for a competition! And here's the prize:

An Alpine INE-W925R Advanced Navi Station (RRP £999), with a 50/50 display allowing you to control sat-nav and in-car entertainment on the same screen; an Adidas miCoach Smart Ball from Pro-Direct Soccer (£170), with sensors to give you instant feedback on your technique; one of three bespoke **Virgin Experience Days Stadium Tour For Two** bundles (total value £312), following in Gazza's footsteps at Wembley (£34), White Hart Lane (£40) and St James' Park (£30); and one of 10 DVDs of **Gascoigne** (£10 each). The other two stadium tour bundles and nine DVDs go to runners-up.

HOW TO ENTER

You'd have to be daft as a brush not to enter this one. Just go to **stuff.tv/win** and answer this question:

WHY DID GASCOIGNE CRY DURING **ENGLAND'S 1990 WORLD CUP SEMI-FINAL?**

6 For full Haymarket terms & conditions see www.stuff.tv/legal

Promoter: Haymarket Media Group, Teddington, Middx TW11 9BE

A ... He broke a fingernail **B** ... He got a yellow card that meant he would be suspended for the final

C... Lineker stole his teddy

Terms & conditions 1 Open to UK residents aged 18 or over. 2 Entries close 11.59pm, 8 July 2015. 3 Prizes are as stated. 4 Prizes are non-transferable. 5 Only one entry per person.







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& smarthome	128
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130 132

For full reviews of every product in the top 10s, visit stuff.tv/reviews

120 SMARTPHONES

HOT BUY	1	This is a new era that were amiss No plastic here: aluminium. In te just. And in the r	Galaxy S6 a for Samsung, with a smart upgrade that fixes not just things in the Galaxy S5, but things that have plagued them for years. its front and back are super-tough Gorilla Glass 4, its sides rms of ergonomics and speaker quality, HTC still wins, but only more important areas of camera performance, screen tech and Galaxy S6 tramples its rival. We just wish it had a microSD slot.	STUFF SAYS Samsung has critics wrong - S6 is the new for flagship ph from £530 y	proven its - the Galaxy benchmark nones
	2	techier and beefier th	66 Edge aparound screen, is the ultimate money-no-object phone. It's nan its brother, but it's also a good deal pricier. Its curvy USP tyle than anything else, but come on, it's pretty darned cool.	from £695	BEST FOR CUTTING-EDGE GADGETEERS
NEW	3	a bit different. Its cam	54 is a treat for those who want something that looks and feels lera is incredibly powerful, giving you almost as much control as screen is brilliant but the battery life holds it back from the top.	£530 ****	
	4	of one of the best ph	s not a full-on revolution, but it is a careful, considered refinement ones ever, packing high-end specs into a premium design. The Il main camera results in beautifully detailed daytime shots.	£500 ****	
	5	organises your life w	y crafted, the Moto X is packed with clever software that ithout feeling intrusive, and the brilliant Moto Maker service genuinely personalised smartphone in wood, plastic or leather.	from £260	
	6	Upgrades range from	e thing wrong with the G3 and so, so much that's right. Is sleeker back buttons to the bigger, better 2K screen and Ira. And it still lasts 15 hours. How do they do it?	£265	
	7	freshest-feeling iPho	attractive build and software overhaul, the iPhone 6 is the one in years. Its larger screen is big enough to be a useful orgeous colours, and this is Apple's best ever battery.	from £505	
	8	of a full-size flagship,	Ompact Jow of a doubt, the best sub-5in Android phone around. The power an excellent camera and an impressive battery life are all crammed bleasure to use no matter the size of your digits. Impressive stuff.	£280	BEST FOR DAINTY HANDS
		Samsung Galaxy I	Note 4	\$450	

FOR THE FULL REVIEWS AND OUR SMARTPHONE BUYING GUIDE, VISIT STUFF.TV/TOP-10S/SMARTPHONES

Samsung was first at the phablet game, and with the Note 4 it's still the best. The ace camera, Multi Window feature and pressure–sensitive S Pen make proper use of the

Google sprinkled some magical Nexus dust over this Motorola blower: the Moto G

costs a mere £125 yet has a distinctly non-budget 4.5in 720p screen and quad-core

processor. Paltry storage and a poor camera count against it — but then again: £125!

Motorola Moto G

extra screen real estate. Plus, it has the longest battery life of any 2K phone we've tested.



Prices quoted are for handset only unless otherwise stated

BEST FOR

SMALLER

BUDGETS

£450

from £125





Apple iPad Air 2

The iPad Air didn't really need to be thinner, but that doesn't mean 6.1mm isn't mighty impressive. This combines with reassuring weight and impeccable build quality to make this the most desirable tab on the planet. While the display is the same Retina resolution as before, clever screen tech brings the pixels closer to the surface, and the whole experience is even faster than before thanks to the new A8X chip. Basically it's the best tablet in the world made even better.

STUFF SAYS

Thinner, lighter and mightier: Apple's iron-fisted reign at the top of the tablet charts continues unabated

from £400 ****

2	Щ
	E STATE OF THE PARTY OF THE PAR
-	100

Apple iPad Mini 2 With Retina Display

The iPad Mini 3 is newer but all it adds is Touch ID. The good news is that the Mini 2 is now down to £240, which is frankly bargain-tastic. That's why the 'old' model stays in our Top 10 – if you're after a mini-tablet of real quality, your choice has just got easier. from £240



Samsung Galaxy Tab S 10.5

Samsung has blessed the Galaxy Tab with one of the best tablet screens we've ever laid eyes on, plus an impressive camera and some incredible stamina – but there are performance niggles and Apple's tablet app selection is still far superior.

£315

MAGAZINES AND MOVIES



Tesco Hudl 2

At this price, the Hudl 2 has far more tech rammed into its 9.85mm-thick body than you'd ever expect. It has a Full HD screen, and its 273ppi display offers the sharpest of images. This is a jaw-dropping bargain, as long as you can put up with Tesco bloat. £95



Microsoft Surface Pro 3

At last, Microsoft has delivered on the promise of the tablet-cum-laptop hybrid. It proves there's space in the world for a design that's more productive than an iPad or Galaxy Note, but easier to hump around than a traditional laptop.

from £640 ****

BEST FOR WORKING ANYWHERE



Asus Transformer Book T100

A stonkingly affordable tabtop with raw power, a neat design and great battery life – perfect for Office on the go, thanks to Intel's new Baytrail CPU. The 1366x768 screen is a good 'un too, with crisp text, great contrast and colours that pop.

£285



The design isn't as pristine, but this is a real Android contender to rival the iPads. You get the new Android 5.0 Lollipop software, bags of power and a super-sharp display. With 12 hours of video play and two front-facing speakers, it'll be a great film buddy.

£280



8



Sony Xperia Z3 Tablet Compact

A slim, light and reliable couch or commute companion, with a screen that looks brilliant despite being 'only' Full HD. The waterproofing may sway people away from choosing an iPad Mini and every gamer's eyes will light up at the mention of PS4 Remote Play.

£300





Microsoft Surface 3

Microsoft finally nailed the hybrid formula with the Surface Pro 3, and now it's translated it to this: a smart, ultra-portable design with the benefits of full Windows 8.1. It's easily the best affordable Surface yet. Just make sure you buy the keyboard. £420





Nvidia Shield Tablet

This really is the ultimate gaming tablet. The Shield's sheer power and gaming smarts are incredible, with a console-quality controller and the option of seamless streaming from your PC. All it needs now is more made-for-Shield games... lots more.

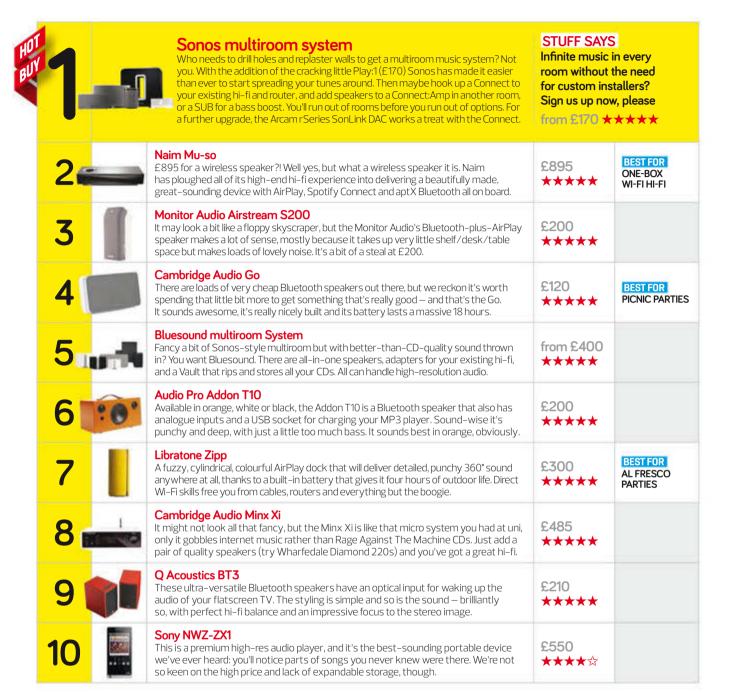
£240 ****



FOR THE FULL REVIEWS AND OUR TABLET BUYING GUIDE, VISIT WWW.STUFF.TV/TOP-10S/TABLETS

AVAILABLE ON ALL MOBILE DEVICES... APPLE OR ANDROID • FREE TO DOWNLOAD NOW!!!

122 HI-FI & MUSIC STREAMING



FOR THE FULL REVIEWS AND OUR HI-FI BUYING GUIDE, JUMP OVER TO STUFF.TV/TOP-10S/HI-FI





SONOS

£299

Save £39



Special Offer, While Stocks Last

This promotion only applies to purchases of the Sonos "2 room starter set" pack, available while stocks last.







AKG K451

They've actually been around a little while now, but what put the K451 on-ears back on to our radar was an official price drop from £130 to £80, and a real-world price of just £50 or less. For that money they're unbeatable – awesomely agile and punchy sound wrapped up in a subtly stylish and foldable design. Add both standard and three-button control cables for maximising compatibility and there's practically no excuse for not getting brilliant sound from your phone.

STUFF SAYS

Fantastic sound and great portability at an almost unbeatable price: the perfect phone upgrade

£40 ****

Bowers & Wilkins P5 Series 2

Even the most demanding audio buff would find it hard to fault these – B&W have delivered a pair of premium on-ears that look, feel and sound exquisite. You control playback and volume with your iPhone, while feeling like a VIP guest at an intimate gig. £250 ****

Philips Fidelio M1 MkII

Your commute deserves a quality soundtrack, and second-generation Fidelio M1 headphones give you precisely that. There's oodles of detail to the sound and they punch harder than the Hulk. Beats and their ilk can't touch them.

£175 ****

SoundMagic E10S

This is actually the third version of SoundMagic's awesome, affordable in-ears – not that you'd tell by looking. They sound even better, though: a little smoother and more refined, with tight, weighty bass. Plus there's now a mic and button for smartphone use. £40 ****

Sonv MDR-EX650AP

If you're prepared to pay a little extra for your in-ears, these Sonys are even better than the SoundMagics above. The sound is that bit bigger, a little more detailed and a little more grown-up, and if you don't like the brass finish there's a silver version.

£60 ****

Bose QuietComfort 25

The best kind of silence is the kind you then fill with sweet, sweet music, and that's what the OuietComfort 25s give you. The active noise-cancelling guells office hubbub, air-conditioning and aeroplane hum, and delivers cracking sound in its place. £250 SHUTTING OUT **** THE WORLD

Philips Fidelio M2BT

Building on the award-winning M1BT, Philips has added NFC for its new wireless Bluetooth headphones and swapped the dark blue design for an understated black finish. The smart built-in controls and rich sound performance remain.

£200 ****

BEST FOR GREAT SOUND WITH NO WIRES

The bright colour options (they're available in yellow, teal and red, as well as black) and massive logo have a slight try-hard feel about them, but the Y50s make up for it by sounding loads better than the more 'street' on-ear headphones out there.

£50

Sol Republic Master Tracks

Really tough things are usually really ugly, which is why the lovely styling of the "virtually indestructible" Master Tracks headphones is so refreshing. Loud, punchy, fast and controlled, the sound is just as attractive as the design. Worth every penny. £90 ****

Sennheiser Momentum

Classily styled, cushion-comfortable and smooth-sounding, the Momentums are the perfect over-ears for the dapper man about town. There's also an on-ear version, smaller and cheaper at £100, available in pink, blue, green, brown and, um, 'ivory'.

£180 ****

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Even 16-bit CDs have only about half of the audio spectrum that the master recording holds and that's a whole lot more than MP3s have left in them. With more than a decade of compressed audio piping through earbud headphones and cheap dock players, the time has come. The portable players we all love have created a new way of listening to music, but there hasn't really been much there to hear. Until now. Enter true 24-bit HD digital audio.

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Bluetooth



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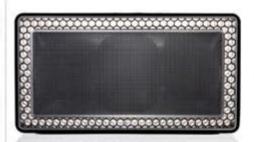
Peak performance with active noise cancelation. Sennheiser's new MOMENTUM Wireless - Closed circumaural headphone feature Bluetooth wireless technology and NoiseGard Hybrid active noise cancelation impedances. MOMENTUM Wireless can also be operated with a detachable cable, just like any conventional headphones.

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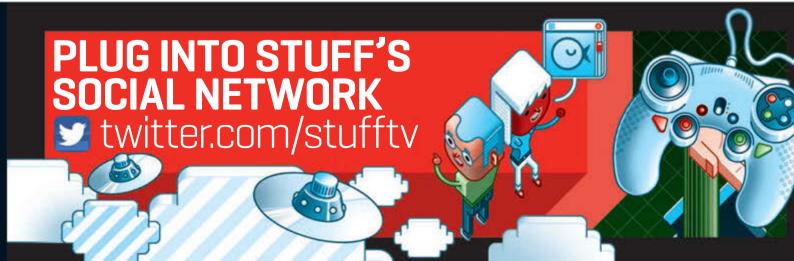
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Issue 1



STUFF SAYS Sky+HD The only choice for serious The new Sky boxes come with built-in Wi-Fi, to make it easier to access on-demand programming, of which there's now more than ever, including TV, movie or sport addicts pre-release blockbuster films. There's now a 2TB drive available that, with more from £free than 65 channels of HD, might well be worth the outlay. On the move, the Sky Go +£21.50/month app is supremely slick. But the most important thing is this: Sky has more movie, V and sport content – and more of it is unique – than any other service. **** Sony BDV-N5200 A whole (home) cinema (minus a telly) in one box? That's the Sony BDV-N5200. £355 A Netflix-toting Blu-ray player, an amplifier, five speakers and a subwoofer, all for **** a lot less than an iPhone 6. There's even a wireless adapter for the rear speakers. Sonos Playbar BEST FOR STREAMING A characteristically Sonos take on the soundbar, the Playbar hooks up to your TV via its £600 single optical input and fills your room with a big, detailed sound. And as with all Sonos **** MUSIC kit, it can stream your own music files, Spotify and more as part of a multiroom system. Sony BDP-S7200 Sure, you can pick up a Blu-ray player for just £50 these days, but if you're serious about £180 your movies then you want to make sure they look and sound crisper than a Kettle Chip. **** That's where the \$7200 comes in. It even throws Netflix and iPlayer into the bargain. Yamaha YSP-2500 £550 If your only requirement for a soundbar is that it should sound better than your telly, almost any will do; but if you want one that will fool your ears into thinking they're **** surrounded by actual speakers, you want the amazingly clever Yamaha YSP-2500. Virgin TiVo from £free Hardware-wise, the taste-learning TiVo is a Sky+HD-beater, but it loses out on +£24/month content. Mind you, subscribers to the 'XL' package now have free access to all the **** BT Sport channels: Premier League football, MotoGP and more, in lovely HD. BenO W1400 What's better than Inception? Inception on a 300in screen, that's what. How do you get £850 a 300in screen in your house? You buy the BenQ W1400. If your lounge isn't quite that **** big it can also project an 84in image from just 2m away. Try finding an 84in TV for £850. Building on the success of the DTR-T1010, Humax has treated us with a more refined £175 version of their suscription-free YouView box. This faster and more compact device has **** a huge variety of catch-up offerings for your sofa-time, but there's still no sign of Wi-Fi. Panasonic DMP-BDT700 £400 The BDT700 is the Blu-ray player for the most serious of serious home cinema buffs. It's all high-end materials, sound-enhancing dampening and 4K-upscaling video circuits. **** But yeah, it'll also stream Vampire Diaries from Netflix if that's more your kind of thing. Sonv BDP-S5200 £85 There's no display, it looks a bit cheap and its remote is a bit naff, but this dinky Blu-ray player offers a lot of bang for very few bucks. For the money you get a very good picture, 3D (if you're still into that), Wi-Fi and plenty of on-demand apps. Bargain. ****

FOR OUR COMPLETE HOME CINEMA TOP 10 LISTS. POINT YOUR CLICKER AT STUFF.TV/TOP-10S





HOT	1	We knew that one day OLED and 4K would be joined in holy matrimony, and that the results would be rather special. That day is now upon us and 'special' doesn't quite do it justice. This 55in LG is the new pinnacle of TV tech and performance, combining the unbelievable colours, contrast and brightness of OLED with the super-sharp, ultra-detailed images of 4K to create a picture that's more real and enticing than looking out of the window.	STUFF SAYS It's mighty price if you're after of flastcreen knot this is currently £3800 ***	cey, but the finest wn to man, y it
	2	LG 55EC930V Not everyone's got £4000 to blow on a flatscreen, and if you have to choose between OLED and 4K it's OLED we'd take right now. The awesome colours, super-deep blacks and amazing contrast will make everything you already watch look extra-amazing.	from £2000 ****	
	3	Samsung UE65JU7000 If you're going to go 4K, best do it big. Samsung's latest 65in Ultra HD offering is a beauty with the screen on or off, and the open-source Tizen Ul is very snazzy. The processor and inputs are still in a separate little unit than can be upgraded in the future.	£2750 ****	
	4	Samsung UE55HU7500 This 55in 4Ker will be replaced in the near future, which means there are some tasty deals around right now. It's a mighty fine telly, too, with all of the usual Samsung smart whizzbang (albeit without the new Tizen UI) and all the lovely detail of Ultra HD.	from £1450 ****	
	5	Sony KDL-50W829B 4K a bit too new-fangled (or pricey) for you? How about a 50in edge-lit LED LCD with all of Sony's smart features for well under a grand? It's not even like picture quality's been sacrificed — this is an absolute corker of a telly in every way.	£680 ****	BEST FOR AFFORDABLE BRILLIANCE
	6	Samsung UE46F7000 The 46in F7000 might just be the sweetest spot in Samsung's current range — the same spectacular performance as the F8000 series but without the show-off design. Great picture quality and slick online functionality in one box.	£1380 ****	
	7	Sony KDL-32W706B There's nothing wrong with sticking with a smaller TV, but you should still make sure you pick a good 'un. This 32in Sony is the best, in terms of both picture performance and features, which include 1080p resolution and all the smart stuff you can handle.	£300 ****	BEST FOR A SMALLER SCREEN
	8	Sony KD-55X8505B If you want to jump on the 4K bandwagon with Sony you could go for the wedge-shaped X9, which is great, but we'd suggest that this slimmer, less intrusive 'entry-level' 55-incher is an even better buy. It's still got all the smart stuff and great performance.	£1300 ****	
	9	LG 42LB700V The performance is very good, but what makes this 42in LG really special is its webOS user interface, which treats all sources, apps, recordings and live broadcasts equally, getting you to the content you want to watch quicker. And isn't that what a TV is for?	£500 ★★★☆	
	<mark>10</mark>	Panasonic TX-42AS500B It's not the prettiest, it's not the smartest, and with just two HDMI inputs it's not the most connected TV about, but there's a really simple, intuitive OS pulling the strings here — and a performance that's very strong given the price and 42in size.	£350 ****	

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128 TOP FIVES WEARABLES & SMARTHOME

WEA	RABLES	5		
HOLD 1	(A)	Apple Watch Apple's Watch is by no means the first smartwatch, but it is the most desirable. It's more luxurious (and yes, more expensive) than its rivals, its software is better thought out, and in the coming months you'll see an explosion of new apps for it.	from £300	BEST FOR TECH YOU WANT TO WEAR
2		Pebble Steel The Steel keeps the straightforward looks, crisp display and five-day battery life that helped the standard Pebble win our hearts. But it holds more RAM, apps and customisable faces, and swaps the plastic for a stylish metal suit.	from £150	BEST FOR BATTERY LIFE
3	0	Fitbit Flex The Flex delivers all of Fitbit's activity-tracking smarts but in a form factor that's less fiddly than its belt-clip counterparts. The tiny module fits in Bluetooth, NFC, a buzzer and an LED display. See also the Fitbit Charge, with numeric display, for a few quid more.	£60 ****	
4	9	Jawbone UP24 With Bluetooth for hassle-free syncing, the stylish UP24 is worth the extra £30 over the Jawbone UP. The app introduces new challenges and tracks your sleep patterns. It will also gently nudge you, if you're lazing around, to get back on the move.	£80 ****	
5	9	Motorola Moto 360 With its circular design, this is a smartwatch that's actually a smart watch. The Moto 360's our favourite and most comfortable Android Wear watch so far, but its battery	£165	

life might make you anxious and it's a few specs short of brilliance.

Nest Learning Thermostat £250 (with Nest has a smart design paired with a ton of features to control your heating in style. installation) We recommend making use of its IFTTT channel: it offers map-based geofencing, **** or you can fire up the boiler with a text. There's even voice control via Google Now. from £50 Pair these smart LED bulbs with 'recipes' on ifttt.com – set them to change colour with the weather or when it's time to run for the train. They also tie in with Philips' **** own Ambilight TVs, casting the colours from the screen across your entire room. Roku Streaming Stick £40 'Streaming Stick' tells you all you need to know, really: it's a stick, and it streams. It streams plenty — Netflix, iPlayer, Spotify, Sky Now and Sky Go to name a few. And unlike Chromecast, it's also a dab hand with your own video and music files. Google Chromecast This USB memory-stick-sized cord-cutter is compatible with Netflix, YouTube, Google Play movies and BBC iPlayer: a cheap, simple way of getting web-sourced £30 **★★★☆** movies and shows onto your living-room TV. Synology DS214se £115 Within this entry-level hardware beats the best NAS (network attached storage) **BACKUP AND** software yet. Not gorgeous to look at, but at least it's small and easy to hide away. ★★★★☆ STREAMING If you're new to the NAS party, the DS214se is the cheapest way to get onboard.

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TOP FIVES CAMERAS 129



SLRs			
1	Olympus OM-D E-M1 The Olympus flagship is armed with the same excellent 16.3MP sensor as its predecessor the E-M5, but has an improved autofocus system, a startlingly good electronic viewfinder and masses of direct controls. Also look out for the E-M10.	£650 (body only)	
2	Canon EOS 700D Look, it's a new Canon at No2. No, wait, it's the old one. Actually, it's kind of both. The 700D is a minor upgrade over the 650D, keeping its 18MP sensor, flip-out touchscreen and autofocus during video and adding little beyond a new kit lens. Still great, though.	£310 (body only)	BEST FOR ALL-ROUND VALUE
3	Sony A6000 Sony's new system camera may be tiny but it packs a big photographic punch. There may be no optical image stabilisation but the incredible speed and accuracy of the A6000's autofocus is a real highlight, as is its large, clear electronic viewfinder.	£370 (body only)	
4	Nikon D750 It's big and bulky, but otherwise this is one of the most comfortable and intuitive DSLRs money can buy. And with a handy tilt screen and some wireless connectivity features, there's none of the purist snootiness that we saw in the D810.	£1300 (body only)	
5	Sony A7R We love this camera. It's lightweight but tough and delivers results that outstrip pretty much any other compact system camera on the market. It has a huge full-frame 36.4MP sensor and noise-suppression. Your wallet might weep, but your photo album will sing.	£1070 (body only) ****	

DMPACT CAMERAS Sonv DSC-HX60 £190 2014's HX60 isn't a huge departure from its predecessor in terms of its build quality, ease of use, specifications and 30x zoom lens – all of which are excellent. What it **** does add is NFC and a newer Bionz X processor, making it a slightly nippier performer. Sony DSC-RX100 III If you're looking for the best tiny snapper around, this is it. Excellent image quality, £490 fast autofocus, a useful electronic viewfinder and professional video recording, all **** squeezed into a truly teeny package that'll fit into your jeans pocket. We're smitten. Panasonic Lumix LX100 This is one the most capable premium compacts on the market – and the LX100's £500 4K capabilities give it a crucial edge over its rivals. HD video capture and superb stills **** performance make the Panasonic a star performer when it comes to the basics too. Fujifilm FinePix X100S £550 Fujifilm souped up its fixed-lens retro shooter last year, with faster focusing and a big APS-C sensor. It retains the 35mm (35mm-equivalent) f/2 lens and hybrid **** viewfinder of the old X100, and a less retro version with black finish is also available. Panasonic Lumix FZ1000 £550 Bridge cameras often feel like a compromise, but the FZ1000 is incredibly versatile: a fixed-lens camera capable of shooting fantastic stills and video in almost any **** situation. And yes, it's nearly the same as the Leica V-Lux 114, but £300 cheaper.

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Metamorphabet

Learning your ABCs is a lot more fun when the A sprouts antlers, morphs into an arch and then goes for a bit of an amble. The animations here range from interactive toys (such as the inevitable xylophone) through to more unusual scenes.



Ulysses

Texts can be organised into folders, marked up, filtered, and exported to all kinds of formats. Your entire text library is optionally mirrored via iCloud, and you get a neat toolbar for statistics, extended characters and search. This is a first-rate tool for any writer.



Yousician Guitar

If you've spent a long time faffing about with tiny plastic guitars, try this app that bridges lessons and gaming. Using a horizontal *Guitar Hero*type display, it guides you through the basics of notepicking and chord-strumming, gradually building your skills.



TouchTone

A brain-teaser for the modern age, Touch Tone's mirror-based routing puzzles are framed as decryption and snooping on phone calls and emails, aiming to 'prevent the next tragedy'. The political undertones are atmospheric and complement the game's moody soundtrack.



130 TOP FIVES HOME COMPUTERS & CONSOLES

HOME COMPUTERS

IOIV	IL COM	FUILINO		
1		Apple iMac Other than regular power upgrades and a bit of slimming, the iMac has been largely unchanged for a while, but it does now run Apple's lovely Yosemite OS. There's also now a more affordable version and an eye-wateringly expensive 5K model.	from £900	BEST FOR ALL-ROUND BRILLIANCE
2		Sapphire Edge VS8 This mini-PC may look like the Terminator's lunchbox, but it houses AMD's 1.6GHz A8 APU and dedicated HD7600G graphics with 4GB of RAM. A capable little fellow, the VS8 even does a decent job with the latest gaming titles (with the detail dialled back a little).	from £260	BEST FOR COMPACT POWER
3		Alienware X51 (2014) The X51 hasn't changed a huge amount, but the wee size matched with powerful components make it perfectly suited to HD gaming. Steam Machines are going to liven this market up but right now it's the best balance of power and form in PC land.	from £600	
4		Raspberry Pi Model B+ It's a fully functioning PC that's barely bigger than a credit card, and now it's more flexible thanks to two extra USB ports and better power management. Don't expect a 'proper' computer — this is for tinkerers. Look out for a review of the Raspberry Pi 2 Model B.	from £30 ★★★☆	
5		Zotac ZBOX Sphere Ol520 About the size and shape of a cannonball or cantaloupe, this striking sphere will certainly draw attention. For media playback it's perfect, but high-end gaming is a no-go due to low frame rates. However, even in full swing it barely raises a decibel.	£360 ★★★☆	

GAMES CONSOLES

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1 🖳	Sony PlayStation 4 It may not quite be the finished article, but this is the best games machine on the planet. It has whisper-quiet operation, a sleek form and bags of power, with full 1080p on all titles and not a whiff of lag. When proper media streaming arrives, it'll be unstoppable.	from £315
2	Microsoft Xbox One This is very different to the Xbox One of 2013. Most significantly, the unpopular Kinect feature is now out of the deal, allowing Microsoft to drop the price and releasing enough extra power for developers to make their games look and play better.	£275 ****
3	Alienware Alpha It's not quite a PS4 or Xbox One-beater, but this is the most console-like PC there's ever been. Steam is the main interface, but it runs on top of Windows for maximum game compatibility, and performance is very impressive.	from £430 ★★★★☆
4	Sony PS Vita Slim If you're serious about gaming on the go, the Vita is way better than a smartphone, and when you get home you can play your PS4 games in bed thanks to Remote Play. That's gaming decadence, right there.	£150 ★★★★☆
5	Nintendo Wii U While it hasn't had the same impact as the original Wii, don't underestimate the U's fun factor. Nintendo's bottomless bag of superb game franchises rolls on with the excitement of Mario Kart 8, with its anti-gravity karts and submarine racing.	£170 ★★★★☆

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Apple MacBook Pro 13in (2015)

Apple hasn't changed too many parts of the MacBook Pro for 2015. There's a fancy new trackpad and the latest generation of Intel CPUs, which deliver better stamina as well as a chunk more power. This is an incremental upgrade, but given how good the Pro already was, that's more than enough to keep it right at the top of the laptop honours list. If you need power as well as stamina and portability, this is one of the best laptops money can buy.

STUFF SAYS

If it ain't broke... it hasn't radically changed, but the Pro's performance and trackpad are top of its class

from £1000 ****



Asus ZenBook UX305

Asus knows what it's doing. It knows that the Apple MacBook Air laptops are treading water and the ZenBook UX305 is pretty much everything the 2015 Air should have been, with its fetching aluminium design and as good a display as any £1000 laptop.

from £650





Microsoft Surface Pro 3

The fact that it's the only device to feature in two of our Top Tens is a testament to the Surface Pro's versatility: it's a strong tablet, but its full-fat operating system and powerful innards mean it's also a worthy adversary to Ultrabooks and MacBooks. from £750 (with Type Cover)

BEST FOR WORKING **ANYWHERE**





This high-end gaming PC is packed into one of the smallest chassis we've ever seen, complete with a drool-worthy Ultra-HD screen, good sound quality and all the storage you'll ever need. It is pretty pricey, but it will keep you at the top of your game.

£1700





Apple MacBook (2015)

This is no 'Air', nor 'Pro': a clear sign that this is what Apple sees as the future of the ultraportable laptop. And it's certainly very desirable: a 12in lean machine with a superb screen and haptic touchpad. However, the lack of ports can be frustrating.

from







Toshiba Chromebook 2

Toshiba has created the most desirable Chromebook to date with some well-judged upgrades. Slightly smaller and lighter, the screen's resolution now has full pin-sharp HD and the Skullcandy speakers are distortion-free. It lasted eight hours on test.

£220







Apple MacBook Air 13in (2015)

Apple is scraping by with pretty much the same Air design as before. You get a new processor, new connectors and slightly improved battery life, but still no Retina screen. However, if a portable road warrior is what you're after, this is still a great choice.

from £750





Google Chromebook Pixel

The new Pixel comes within a hair's breadth of five stars. With its pin-sharp screen and class-leading design, it is a superb laptop. But it's a superb laptop that still only runs one browser. Still, you could always install Ubuntu on it...

from £800





Lenovo Yoga Pro 3

The third entry in the Yoga Pro line refines the laptop/tablet hybrid design with a power-sipping new Intel Core M processor plus slimness and style to make even the MacBook Air look worried. And you can stand it up like a tent. If you want.

£1000





Dell Chromebook 11

Well-built, tough and powerful: Dell has delivered pretty much all you could want from a wallet-friendly Chromebook. Its high-quality finish, solid keyboard and responsive trackpad feel premium and it's a runaway success in our benchmarks. £210 ****

VALUE FOR MONEY

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Stuff said Disappointingly the maximum video resolution it displays is 320x240. Still, movement is faultless and colours are deliriously vibrant. It's not the portable audiovideo revolution we'd hoped for, but a strong contender for your pocket space.



The ultra-fine print head produces an incredible amount of detail, although others edge it on colour balance and black depth. No Wi-Fi or card reader here, just top-quality image processing. You can also use it to print designs onto CDs and DVDs.



There's a satisfying, compact snappiness about the DSi that eludes the PSP. It sits well in the hand, while the dual displays, touchscreen and new camera work well together. The front has a simple scrolling dock, which many will prefer to Sony's perplexing system.



This is a fabulous Blu-ray player. Build and looks are spot-on, from the internal layout of separated boards that reduces interference, to the touch-sensitive buttons Pictures are excellent too, with films displaying razor-sharp edges and detail.



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www.huromuk.com



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www.arlo.com/uk



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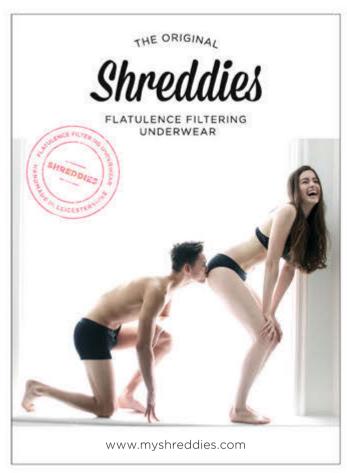


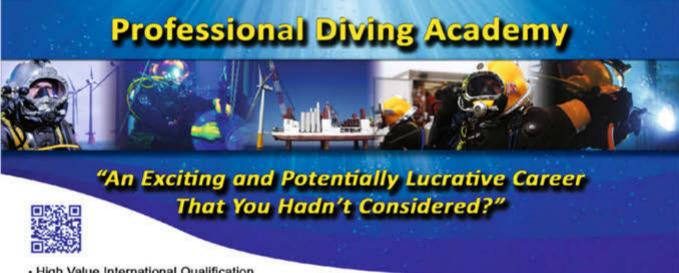
HUROM SLOW JUICER HF SERIES / £499

The HF Series is the secondgeneration Hurom Slow Juicer and features a fetching stainless steel body. Not only does it look great, it also serves up more nutritious juice.

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CHRISTOPHER WARD TRIDENT C60 PRO 600 / FROM £599

Christopher Ward's best-selling
C60 Trident Pro has been
comprehensively
upgraded to include
a re-engineered,
marine-grade,
stainless-steel
case (in 38mm and
42mm sizes), and
it's watertight all the
way down to 600m.

www.christopherward.co.uk

ELLIOT BROWN BLOXWORTH 929-007 / £550

Unique durability is standard on every Elliot Brown watch. This one survived six months of winter submerged in freezing cold salt water, and kept on ticking – as well as looking like new when cleaned.

www.elliotbrownwatches.com

SEVENFRIDAY P2-1 AND P2-2 £825

Industry, architecture, engines and design icons. Sevenfriday is strongly inspired by those elements, from design to construction.

See Jura
Watches – the
UK's largest

online luxury watch retailer – for the range.

www.jurawatches.co.uk

DU MAURIER MAXIM BLACK II / £445

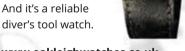
English design house Du Maurier watches presents the Maxim Black II: Swiss-made with multi-layered sapphire glass, 316 surgicalgrade steel and a stunning, jet-black, textured dial.



www.dumaurierwatches.com

TUDOR HERITAGE BLACK BAY £1,995 (PRE-OWNED, AS NEW)

Tudor's new range marries past triumphs with contemporary style, from a meticulous movement to classic design. And it's a reliable



www.oakleighwatches.co.uk

PINION AXIS PURE £2,950

The Axis Pure is limited to 50 pieces, each in brushed marine-grade bronze. Inside is a Swiss handwound movement, and outside is a contrast-finish multi-level dial with polished and applied indexes.



www.pinionwatches.com

BREMONT ALT 1-C £3,395 (PRE-OWNED, AS NEW)

The English-made automatic Bremont ALT 1-C combines the best of classic design with modern precision, reliability and durability. Choose from seven classic styles.



www.oakleighwatches.co.uk

BQ WATCHES

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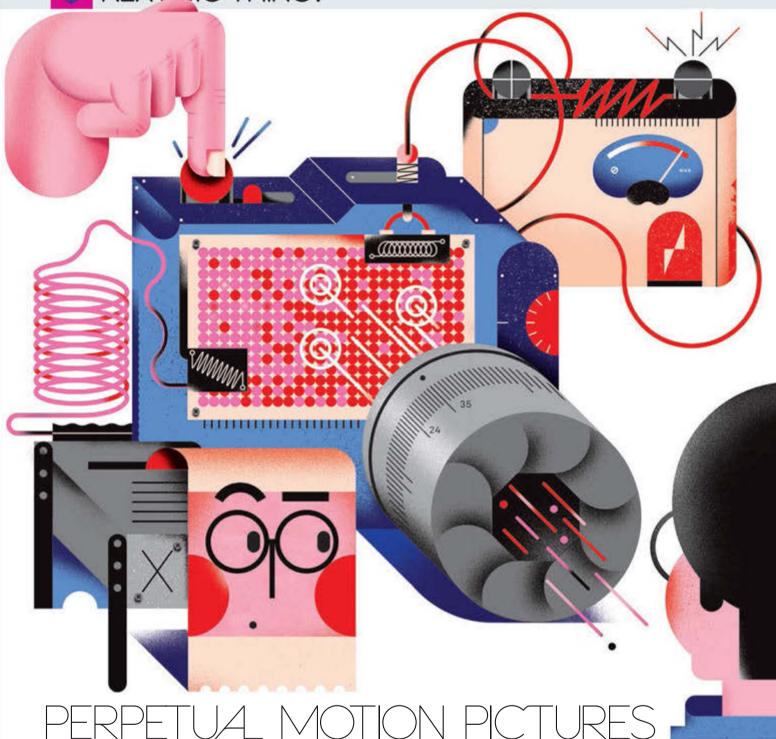
www.bqwatches.com

VINTAGE WATCH MOVEMENT CUFFLINKS / £49

1920s–50s watch movements, set with their original ruby jewels, backed with vintage leather and presented in vintage-inspired box.



www.prettyeccentric.co.uk



ou mean like Van Helsing? I'm pretty sure that only seemed to last forever. It did. But, like the film Van Helsing, there are some things that should not be. Concepts that should trip the big fusebox in the sky and make the universe go dark. Like a mini wind turbine attached to the front of an electric bicycle... or the idea that if time travel will ever exist, then it already exists, and so must never have existed. Shudder. A team at Columbia University is dabbling in similarly dubious territory, by inventing a camera that is powered by what it captures.

If vanity was an energy source, humans would be in a lot less trouble right now.

Snarky species smackdown! No, not vanity, light. See, a camera sensor is made up of lots of photodiodes that turn light into an electrical signal; the camera's processor turns those signals into visual data. A solar panel, on the other hand, is made up of lots of photodiodes that turn light into electrical power. The Columbia Computer Vision Laboratory has built a video camera that flip-flops between photoconductive and photovoltaic modes so it can power its own image capture.

Holy continuous shooting! But to what end?

Well, it's not for the Annie Leibovitzes of this world. Not yet, anyway— the Columbia continuo—cam takes one tiny, 30x40—pixel frame per second. But simultaneous powering and shooting is just showing off, really: the sensor could just as easily send energy to a battery for use at night, meaning you could have a compact camera (or a CCTV setup) that never runs dry. Which might mean we can all take three—week holidays without needing an adapter, or it might mean a surveillance network that never blinks. Fingers crossed!

Words Fraser Macdonald Ilustration Bratislav Milenkovic

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